

Indiana Department of Transportation

County Hamilton Route 191st Street/Grassy Branch Road Des. No. 1700731

FHWA-Indiana Environmental Document CATEGORICAL EXCLUSION / ENVIRONMENTAL ASSESSMENT FORM GENERAL PROJECT INFORMATION

Road No./County:

191st Street and Grassy Branch Road / Hamilton County, Indiana

Designation Number:

1700731

**Project
Description/Termini:**

Roundabout construction and roadway approach improvements within approximately 500 feet of the 191st Street and Grassy Branch Road intersection. Drainage improvements (storm sewer) will extend south of the intersection along Grassy Branch Road approximately 1,700 feet to Cool Creek.

After completing this form, I conclude that this project qualifies for the following type of Categorical Exclusion (FHWA must review/approve if Level 4 CE):


X	Categorical Exclusion, Level 2 – The proposed action meets the criteria for Categorical Exclusion Manual Level 2 - Table 1, CE Level Thresholds. Required Signatories: ESM (Environmental Scoping Manager)
	Categorical Exclusion, Level 3 – The proposed action meets the criteria for Categorical Exclusion Manual Level 3 - Table 1, CE Level Thresholds. Required Signatories: ESM, ES (Environmental Services Division)
	Categorical Exclusion, Level 4 – The proposed action meets the criteria for Categorical Exclusion Manual Level 4 - Table 1, CE Level Thresholds. Required Signatories: ESM, ES, FHWA
	Environmental Assessment (EA) – EAs require a separate FONSI. Additional research and documentation is necessary to determine the effects on the environment. Required Signatories: ES, FHWA

Note: For documents prepared by or for Environmental Services Division, it is not necessary for the ESM of the district in which the project is located to release for public involvement or sign for approval.

Approval

ESM Signature _____	Date _____	ES Signature _____	Date _____
FHWA Signature _____	Date _____		

Release for Public Involvement

N/A _____	Date _____	 _____	3/31/2020 _____
ESM Initials	Date	ES Initials	Date

Certification of Public Involvement

Office of Public Involvement _____ Date _____

Note: Do not approve until after Section 106 public involvement and all other environmental requirements have been satisfied.

INDOT ES/District Env. Reviewer Signature: _____ Date: _____

Name and Organization of CE/EA Preparer: Daniel J. Stevens, DLZ Indiana, LLC

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Part I - PUBLIC INVOLVEMENT

Every Federal action requires some level of public involvement, providing for early and continuous opportunities throughout the project development process. **The level of public involvement should be commensurate with the proposed action.**

	Yes	No
Does the project have a historic bridge processed under the Historic Bridges PA*?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If No, then:		
Opportunity for a Public Hearing Required?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**A public hearing is required for all historic bridges processed under the Historic Bridges Programmatic Agreement between INDOT, FHWA, SHPO, and the ACHP.*

Discuss what public involvement activities (legal notices, letters to affected property owners and residents (i.e. notice of entry), meetings, special purpose meetings, newspaper articles, etc.) have occurred for this project.

Remarks:

Notice of Entry letters were mailed to potentially affected property owners near the project area on October 31, 2017 notifying them about the project and that individuals responsible for land surveying and field activities may be seen in the area. A sample copy of the Notice of Entry letter is included in Appendix G, pages 1 to 2.

To meet the public involvement requirements of Section 106, a legal notice of FHWA's finding of No Historic Properties Affected was published in the Indianapolis Star on February 2, 2019 offering the public an opportunity to submit comment pursuant to 36 CFR 800.2(d), 800.3(e), and 800.6(a)(4). The public comment period closed 30 days later on March 8, 2019. The text of the public notice and the affidavit of publication appear in Appendix D, pages 55 to 57). No public comments were received regarding the Section 106 public notice.

The project will meet the minimum requirements described in the current *Indiana Department of Transportation (INDOT) Public Involvement Manual* which requires the project sponsor to offer the public an opportunity to submit comment and/or request a public hearing. Therefore, a legal notice will appear in a local publication contingent upon the release of this document for public involvement. This document will be revised after the public involvement requirements are fulfilled.

Public Controversy on Environmental Grounds

Will the project involve substantial controversy concerning community and/or natural resource impacts?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:

At this time there is no substantial public controversy concerning impacts to the community or to natural resources.

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Part II - General Project Identification, Description, and Design Information

Sponsor of the Project: Hamilton County, Indiana INDOT District: Greenfield
Local Name of the Facility: 191st Street and Grassy Branch Road

Funding Source (mark all that apply): Federal ☒ State ☐ Local ☒ Other* ☐

*If other is selected, please identify the funding source: _____

PURPOSE AND NEED:

Describe the transportation problem that the project will address. The solution to the traffic problem should NOT be discussed in this section. (Refer to the CE Manual, Section IV.B.2. Purpose and Need)

Project Purpose

The project's purpose is to improve the 191st Street/Grassy Branch Road intersection's operational characteristics to provide for the efficient movement of traffic at an acceptable Level of Service (LOS) through the project design year of 2042. The acceptable LOS per the Indiana Design Manual is LOS D or better for the overall intersection. The 2042 design year is based upon traffic projections and the expected lifetime of the roadway surface.

Project Need

The existing four-leg, stop-controlled intersection causes excessive delays and queuing for motorists. Traffic volumes will increase in the future due to continued residential and commercial growth in the project vicinity. If no improvements are made, the overall intersection would perform at LOS F (with southbound approach at LOS C and eastbound approach at LOS E) during the peak hour (PM) for the projected design year of 2042. The Congestion Mitigation and Air Quality Improvement Program (CMAQ) traffic analysis prepared for the project detailing the project need is provided in Appendix J, pages 2 to 25.

Note: The determination of acceptable traffic operation is based on the Highway Capacity LOS calculated using the methods of the Transportation Research Board Highway Capacity Manual, 2010 Edition. The LOS is a quantitative measure that describes the quality of operating conditions within the traffic stream and the perception of motorists. Per Indiana Design Manual guidelines, the minimum acceptable LOS in an urban setting is LOS D while LOS C is desirable. A LOS E results in unstable flow, operating at capacity. Flow becomes irregular and speed varies rapidly because there are virtually no usable gaps to maneuver in the traffic stream and speeds rarely reach the posted limit. Any incident will create serious delays. A LOS F results in "stop and go" conditions and a failure of the system to provide for a smooth, orderly flow of traffic. In this case, the volume often exceeds the capacity of the intersection. Traffic is interrupted and impeded to the point that it can become "gridlocked" and the capacity of the road system is greatly diminished.

PROJECT DESCRIPTION (PREFERRED ALTERNATIVE):

County: Hamilton County Municipality: N/A

Limits of Proposed Work: The limits of the roundabout construction extend along the roadway approaches 500 feet of the intersection in each direction. Drainage improvements (storm sewer) will extend south of the intersection along Grassy Branch Road approximately 1,700 feet to Cool Creek.

Total Work Length: 0.648 Mile(s) Total Work Area: Approximately 6.50 Acre(s)

Is an Interchange Modification Study / Interchange Justification Study (IMS/IJS) required?
If yes, when did the FHWA grant a conditional approval for this project?

Yes ¹	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
Date: _____	

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¹If an IMS or IJS is required; a copy of the approved CE/EA document must be submitted to the FHWA with a request for final approval of the IMS/IJS.

In the remarks box below, describe existing conditions, provide in detail the scope of work for the project, including the preferred alternative. Include a discussion of logical termini. Discuss any major issues for the project and how the project will improve safety or roadway deficiencies if these are issues.

Location:

The project is within Washington Township, USGS Noblesville Topographic Quadrangle, in Sections 29 and 30, Township 19 North, Range 4 East, Hamilton County, Indiana. The roundabout and approach construction will take place within approximately 500 feet of the 191st Street and Grassy Branch Road intersection in each direction. Drainage improvements (storm sewer) will extend south of the intersection along Grassy Branch Road approximately 1,700 feet to Cool Creek. Refer to the project area location maps and project area photographs presented in Appendix B, pages 1 to 4.

Existing Conditions:

The existing intersection is a four way stop intersection. The intersecting roadways are all 2-lane roads. The intersection is deficient because it frequently has traffic congestion. The intersecting roadways are pedestrian deficient because no sidewalks are present in the project limits. The existing roadway drainage is deficient. Existing drainage flows from the roadway to swales, intermittent shallow ditches, or onto neighboring land. No storm sewer system is present. No existing street lighting is present in the project limits.

191st Street is functionally classified as a Collector roadway. It consists of two 10-foot travel lanes (one in each direction) with no shoulders. The posted speed limit is 50 mph. Grassy Branch Road is also functionally classified as a Collector roadway. It consists of two 11-foot travel lanes (one in each direction) with no shoulders. The posted speed limit is 45 mph.

The project area contains agricultural land in the southeast quadrant, church property in the northeast quadrant, wooded land in the northwest quadrant, and residential property in the southwest quadrant. The location of the proposed drainage improvements south of the intersection are within agricultural land.

Description of Preferred Alternative:

The proposed project will reconstruct the existing four-way stop intersection of 191st Street and Grassy Branch Road into a two-lane roundabout. Preliminary plans are provided in Appendix B, pages 6 to 26. The project will include approximately 500 feet of approach work in each direction. The design speed will be 50 mph for 191st Street and 45 mph for Grassy Branch Road, along the roundabout approach roadways. The proposed width of each lane will be a minimum of 11 feet. An 8-foot-wide multiuse trail is included around the outside of the roundabout, within the limits of the curb ramps and splitter islands, on all the approaches. The multiuse trail will also be included along the north side of 191st Street along the east leg only, within the project limits. At the east termini the multiuse trail will connect to a trail being built as part of a new housing development that is currently under construction. A graphic of the development is provided in Appendix B, page 27. At the west termini the multiuse trail will cross Grassy Branch Road and terminate at 191st Street west of the roundabout via ADA compliant curb ramps. The project will also include new lighting in the project limits.

Crosswalks and ADA compliant ramps will be included for each leg (at entry and exit locations). The project will include concrete curbs with an enclosed storm sewer network to provide drainage away from the pavement areas. Stormwater detention for this project will involve construction of a new basin along the south approach that will outlet through a new ditch into Cool Creek on the west side of Grassy Branch Road approximately 1,700 south of the intersection.

The CMAQ traffic analysis (Appendix J, pages 2 to 25) was performed based on the methodology outlined in the Highway Capacity Manual, 2010 Edition using the Synchro 9 and Sidra 7 software packages. The analysis shows LOS B in the year 2042 during both AM and PM peak hours. The proposed roundabout intersection at 191st Street and Grassy Branch Road is expected to perform at an acceptable LOS (LOS B or better) through the design year of 2042. The new roundabout will reduce traffic congestion and delays at the intersection.

The preliminary project's cost is estimated to be \$3,260,000, consisting of \$335,000 for preliminary engineering, \$180,000 for right of way and \$2,745,000 for construction. The project will require the acquisition of approximately 4.95 acres of land for new permanent right of way and approximately 0.03 acre for temporary right of way. The total work area of approximately 6.50 acres includes the existing right-of-way in addition to the proposed right of way acquisition amounts. The project will result in impacts to land in developed residential use, farmland, undeveloped land and church property. Waterway permitting is required for impacts to Cool Creek for a new stormwater outfall.

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The Preferred Alternative will satisfy the project's purpose and need of improving the 191st Street Road/Grassy Branch Road intersection's operational characteristics and providing for the efficient movement of traffic through the project design year of 2042 by constructing a roundabout intersection in place of the existing, stop-controlled intersection.

The roundabout project has independent utility because it does not rely on any other project in the project area to meet the stated purpose and need. The roadway project termini along each leg are logical termini because they are located the distance from the intersection required to transition the proposed roadway improvements back to the existing roadways. The southern terminus of the storm sewer at Cool Creek is the logical termini because it is the nearest surface water.

The multiuse trail has independent utility because it will provide a non-motorized facility extending from a trail connection at the east project limit to the west utilizing crosswalks through the roundabout intersection. The east trail terminus is a logical terminus because it will connect to a trail being built as part of a new housing development that is currently under construction and is expected to be completed prior to the construction of this project. The west trail terminus is a logical terminus because it ties the multiuse trail to Grassy Branch Road, 191st Street, and crosswalks through the roundabout. Future projects may connect to this trail but are not known at this time per the City of Westfield (See Appendix C, page 52). As a result, the multiuse trail terminates at 191st Street on the west side of the roundabout.

Maintenance of Traffic:

During construction the intersection will be closed to traffic and a detour will be provided. Refer to the Maintenance of Traffic During Construction section below for further descriptions of the detour route.

OTHER ALTERNATIVES CONSIDERED:

Describe all discarded alternatives, including the Do-Nothing Alternative and an explanation of why each discarded alternative was not selected.

Do Nothing:

Under the Do Nothing or "No Build" alternative, no action would occur. With this alternative, the existing intersection will remain with no improvements. This alternative will not meet the stated purpose and need of the project. Therefore, this alternative has been discarded from further consideration.

No other alternatives were considered.

The Do Nothing Alternative is not feasible, prudent or practicable because (Mark all that apply):

It would not correct existing capacity deficiencies;

It would not correct existing safety hazards;

It would not correct the existing roadway geometric deficiencies;

It would not correct existing deteriorated conditions and maintenance problems; or

It would result in serious impacts to the motoring public and general welfare of the economy.

Other (Describe): Operational efficiency

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>

ROADWAY CHARACTER:

191st Street

Functional Classification:	Collector				
Current ADT:	9,630	VPD (2022)	Design Year ADT:	13,815	VPD (2042)
Design Hour Volume (DHV):	1,380	Truck Percentage (%)	2		
Designed Speed (mph):	50	Legal Speed (mph):	50		

	Existing	Proposed
Number of Lanes:	2	2
Type of Lanes:	Through travel (10 feet wide)	Through travel (11 feet wide)
Pavement Width:	20 ft.	22 ft.

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Shoulder Width:	N/A	ft.	N/A	ft.
Median Width:	N/A	ft.	N/A	ft.
Sidewalk Width:	N/A	ft.	N/A	ft.

Setting: ☐ Urban ☒ Suburban ☐ Rural
 Topography: ☒ Level ☐ Rolling ☐ Hilly

Grassy Branch Road

Functional Classification: Collector
 Current ADT: 3,740 VPD (2022) Design Year ADT: 5,365 VPD (2042)
 Design Hour Volume (DHV): 540 Truck Percentage (%): 2
 Designed Speed (mph): 45 Legal Speed (mph): 45

	Existing	Proposed
Number of Lanes:	2	2
Type of Lanes:	Through travel (11 feet wide)	Through travel (11 feet wide)
Pavement Width:	22 ft.	22 ft.
Shoulder Width:	N/A ft.	N/A ft.
Median Width:	N/A ft.	N/A ft.
Sidewalk Width:	N/A ft.	10 ft.

Setting: ☐ Urban ☒ Suburban ☐ Rural
 Topography: ☒ Level ☐ Rolling ☐ Hilly

If the proposed action has multiple roadways, this section should be filled out for each roadway.

DESIGN CRITERIA FOR BRIDGES:

Structure/NBI Number(s): N/A Sufficiency Rating: N/A

	Existing	Proposed
Bridge Type:	N/A	N/A
Number of Spans:	N/A	N/A
Weight Restrictions:	N/A ton	N/A ton
Height Restrictions:	N/A ft.	N/A ft.
Curb to Curb Width:	N/A ft.	N/A ft.
Outside to Outside Width:	N/A ft.	N/A ft.
Shoulder Width:	N/A ft.	N/A ft.
Length of Channel Work:		N/A ft.

Describe bridges and structures; provide specific location information for small structures.

Remarks: No existing bridges, small structures, or pipes for drainage are located within this project area. The project will include new drainage pipes in the enclosed storm system.

Will the structure be rehabilitated or replaced as part of the project? ☐ Yes ☐ No ☒ N/A

If the proposed action has multiple bridges or small structures, this section should be filled out for each structure.

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MAINTENANCE OF TRAFFIC (MOT) DURING CONSTRUCTION:

	Yes	No
Is a temporary bridge proposed?		X
Is a temporary roadway proposed?		X
Will the project involve the use of a detour or require a ramp closure? (describe in remarks)	X	
Provisions will be made for access by local traffic and so posted.	X	
Provisions will be made for through-traffic dependent businesses.		X
Provisions will be made to accommodate any local special events or festivals.		X
Will the proposed MOT substantially change the environmental consequences of the action?		X
Is there substantial controversy associated with the proposed method for MOT?		X

Remarks:

The MOT for the project will require closure of the intersection and a detour will be provided. The posted detour for Grassy Branch Road will follow 186th Street, East Street, and 196th Street and will add 1.45 miles to trips with origins south of 186th Street and destinations north of 196th Street. The posted detour for 191st Street will follow East Street, 196th Street, and Moontown Road and will add 0.95 miles to trips with origins west of East Street and destinations east of Moontown Road. Access to parcels abutting the project area will be maintained throughout the duration of construction.

The closures/lane restrictions will pose a temporary inconvenience to traveling motorists (including school buses and emergency services); however, no significant delays are anticipated and all inconveniences will cease upon project completion. Delays may occur during construction but will cease with project completion.

ESTIMATED PROJECT COST AND SCHEDULE:

Engineering: \$ 335,000 (2018) Right-of-Way: \$ 180,000 (2020) Construction: \$ 2,745,000 (2022)

Anticipated Start Date of Construction: Fall 2021

Date project incorporated into STIP July 2, 2019

Is the project in an MPO Area?

Yes	No
<input checked="" type="checkbox"/>	<input type="checkbox"/>

If yes,

Name of MPO Indianapolis Metropolitan Planning Organization (IMPO)

Location of Project in TIP 2020-2024 TIP Project Listing
(https://mitip.indympo.org/project_info.asp?project_id=1015453&version=3&list_of_layers=CLIP0)

Date of incorporation by reference into the STIP July 2, 2019 (Appendix H, pages 3 to 5)

RIGHT OF WAY:

Land Use Impacts	Amount (acres)	
	Permanent	Temporary
Residential	0.96	0.03
Commercial	0	0
Agricultural	1.75	0

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Forest	1.13	0
Wetlands	0	0
Other: Church	1.11	0
TOTAL	4.95	0.03

Describe both Permanent and Temporary right-of-way and describe their current use. Typical and Maximum right-of-way widths (existing and proposed) should also be discussed. Any advance acquisition or reacquisition, either known or suspected, and there impacts on the environmental analysis should be discussed.

Remarks:

Within the project limits, the typical width of the existing 191st Street right-of-way is 20 feet and coincident with the edges of existing pavement. The typical width of the existing Grassy Branch Road right-of-way is 22 feet and coincident with the edges of existing pavement.

The project requires approximately 4.95 acres of permanent right-of-way consisting of 0.96 acre of residential land located in the southwest quadrant of the intersection, 1.13 acres of forested land located in the northwest quadrant of the intersection, 1.75 of agricultural land located both in the southeast quadrant of the intersection and along the west side of Grassy Branch Road to the south of the intersection, and 1.11 acres of church property located in the northeast quadrant of the intersection. The project also requires approximately 0.03 acre of temporary right-of-way from residential land in the southwest quadrant of the intersection.

If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately.

Part III – Identification and Evaluation of Impacts of the Proposed Action

SECTION A – ECOLOGICAL RESOURCES

Streams, Rivers, Watercourses & Jurisdictional Ditches

Federal Wild and Scenic Rivers
State Natural, Scenic or Recreational Rivers
Nationwide Rivers Inventory (NRI) listed
Outstanding Rivers List for Indiana
Navigable Waterways

Presence

X

Impacts

Yes	No
X	

Remarks:

Based on a desktop review, a site visit on November 7, 2017 by a DLZ Wetland Scientist, the aerial map of the project area (Appendix B, page 3), and the water resources map in the Red Flag Investigation (RFI) report (Appendix E, page 8), there is one stream located within the 0.5 mile search radius. There is one stream, river, watercourse, or jurisdictional ditch present within or adjacent to the project area. Cool Creek is an approximately 13-foot-wide perennial stream located at the southern project terminus.

A *Waters of the U.S. Report* was completed for the project on May 2, 2018. Please refer to Appendix F, pages 1 to 28 for the *Waters of the U.S. Report*. It was determined that Cool Creek is a perennial drainage feature in the project area and displayed an ordinary high water mark (OHWM). Cool Creek also connects to a traditional navigable water and is therefore considered a Water of the U.S. The United States Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

There are no Federal, Wild and Scenic Rivers; State Natural, Scenic, and Recreational Rivers; Outstanding Rivers for Indiana; navigable waterways or National Rivers Inventory waterways present in the project area.

The project will involve drainage improvements that would require a small amount (less than 20 linear feet) of

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impact below the OHWM of Cool Creek for the construction of a new stormwater outfall. Permits will likely be required for the impacts below the OHWM from USACE and IDEM. The project is not anticipated to exceed typical stream mitigation thresholds; however, the USACE will make the final determination regarding the need for mitigation during the permitting process.

Early Coordination requests were sent to the Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR-DFW), United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (USFWS), Indiana Department of Environmental Management (IDEM) and the Hamilton County Surveyor's Office on May 7, 2018, as these agencies have jurisdiction over streams or may have related concerns. Listed below are indications of agency responses received and references to the Appendix pages where the received responses may be found:

- IDNR-DFW, June 6, 2018, Appendix C, pages 20 to 22
- USACE, No response
- USFWS, May 16, 2018, Appendix C, pages 23 to 25
- IDEM, October 17, 2019, Appendix C, pages 4 to 11
- Hamilton County Surveyor's Office, May 10, 2018, Appendix C, page 12.

IDNR-DFW and USFWS provided recommendations regarding in-channel construction timing, minimization of stream and vegetation impacts, stormwater management and the implementation of erosion and sedimentation control measures for minimizing impacts to streams.

IDEM's electronically generated Early Coordination response included a recommendation for minimization of impacts to streams.

Hamilton County Surveyor had no comments related to the stream.

All applicable agency recommendations are included in the Environmental Commitments section of this CE document.

Other Surface Waters

Reservoirs

Lakes

Farm Ponds

Detention Basins

Storm Water Management Facilities

Other: _____

Presence

X

Impacts

Yes	No
	X

Remarks:

Based on a desktop review, a site visit on November 7, 2017 by a DLZ Wetland Scientist, the aerial map of the project area (Appendix B, page 3), and the water resources map in the RFI report (Appendix E, page 8), there are three lake features located within the 0.5 mile search radius. There is one other surface water present within or adjacent to the project area.

A *Waters of the U.S. Report* was completed for the project on May 2, 2018. Please refer to Appendix F, pages 1 to 28 for the *Waters of the U.S. Report*. It was determined that the manmade pond (retention basin) in the northeast quadrant of the intersection was built in 2007 based on historical aerial photographs. Enclosed storm sewer pipes and parking lot drainage enter this feature. This feature is not considered a Waters of the U.S. per 33 CFR 328.3 (b)(6) because it is a stormwater control feature constructed to convey, treat, or store stormwater that was created in dry land. In addition, features such as this are not considered to be waters of the State of Indiana per 327 IAC 17-1-3-13-B and C where the term "waters" is defined to exclude private ponds (part B), or facilities such as an off-stream pond, reservoir, wetland, or other facility built for reduction or control of pollution or cooling of water before discharge (part C). This retention basin is outside of the project limits and no project generated drainage will be directed into this retention basin. Therefore, no impacts to this retention basin are expected. The United States Army Corps of Engineers (USACE) makes all final determinations regarding jurisdiction.

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Early Coordination requests were sent to the Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR-DFW), United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (USFWS), Indiana Department of Environmental Management (IDEM) and the Hancock County Surveyor's Office on May 7, 2018, as these agencies have jurisdiction over other surface waters or may have related concerns. Listed below are indications of agency responses received and references to the Appendix pages where the received responses may be found:

- IDNR-DFW, June 6, 2018, Appendix C, pages 20 to 22
- USACE, No response
- USFWS, May 16, 2018, Appendix C, pages 23 to 25
- IDEM, October 17, Appendix C, pages 4 to 11
- Hamilton County Surveyor's Office, May 10, 2018, Appendix C, page 12.

IDEM's electronically generated Early Coordination response included a generic recommendation for minimization of impacts to other surface waters and none of the other agencies referenced other surface waters in their responses.

All applicable agency recommendations are included in the Environmental Commitments section of this CE document.

Wetlands

Presence

☐

Impacts

Yes

☐

No

☐

Total wetland area: N/A acre(s) Total wetland area impacted: N/A acre(s)

(If a determination has not been made for non-isolated/isolated wetlands, fill in the total wetland area impacted above.)

Wetland No.	Classification	Total Size (Acres)	Impacted Acres	Comments

Documentation

ES Approval Dates

Wetlands (Mark all that apply)

Wetland Determination

X

Wetland Delineation

☐

USACE Isolated Waters Determination

☐

Mitigation Plan

☐

N/A (LPA Project)

☐☐☐

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Improvements that will not result in any wetland impacts are not practicable because such avoidance would result in (Mark all that apply and explain):

Substantial adverse impacts to adjacent homes, business or other improved properties;
 Substantially increased project costs;
 Unique engineering, traffic, maintenance, or safety problems;
 Substantial adverse social, economic, or environmental impacts, or
 The project not meeting the identified needs.

Measures to avoid, minimize, and mitigate wetland impacts need to be discussed in the remarks box.

Remarks:

Based on a review of the National Wetlands Inventory (NWI) online mapper (<https://www.fws.gov/wetlands/data/Mapper.html>), a site visit on November 7, 2017 by a DLZ Wetland Scientist, the USGS topographic map (Appendix B page 2), and the RFI report (Appendix E page 8) there are 21 wetlands located within the 0.5 mile search radius. There is one wetland present within or adjacent to the project area.

A *Waters of the U.S. Report* was completed for the project on May 2, 2018. Please refer to Appendix F, pages 1 to 28 for the *Waters of the U.S. Report*. An NWI wetland is shown in the northwest quadrant of the intersection and within the project area. A site visit was conducted on November 7, 2017 by a DLZ Wetland Scientist and determined that this NWI mapped feature is not a wetland. There are no wetland features in the project limits. Therefore, no impacts are expected. The USACE makes all final determinations regarding jurisdiction.

Early Coordination requests were sent to the Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR-DFW), United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (USFWS), and Indiana Department of Environmental Management (IDEM) on May 7, 2018, as these agencies have jurisdiction over wetlands or may have related concerns. Listed below are indications of agency responses received and references to the Appendix pages where the received responses may be found:

- IDNR-DFW, June 6, 2018, Appendix C, pages 20 to 22
- USACE, No response
- USFWS, May 16, 2018, Appendix C, pages 23 to 25
- IDEM, October 17, Appendix C, pages 4 to 11

IDEM's electronically generated Early Coordination response included a generic recommendation for minimization of impacts to wetlands and none of the other agencies referenced wetlands in their responses.

All applicable agency recommendations are included in the Environmental Commitments section of this CE document.

Terrestrial Habitat

Unique or High Quality Habitat

Presence

X

Impacts

Yes No

X	

Use the remarks box to identify each type of habitat and the acres impacted (i.e. forested, grassland, farmland, lawn, etc).

Remarks:

Based on a desktop review, a site visit on November 7, 2017 by a DLZ Wetland Scientist, the aerial map of the project area (Appendix B, page 3), there are terrestrial habitats consisting of forest, sparsely wooded residential property, lawn, and agricultural land. Not including the existing roadway, approximately 4.95 acres of such terrestrial habitat area will be affected which consist of approximately 1.13 acres of forest, 0.96 acres of sparsely wooded residential property, 1.11 acres of lawn (church property), and 1.75 acres of agricultural land. Dominant tree species in the forested habitat are sugar maple (*Acer saccharum*), beech (*Fagus*

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grandifolia), black cherry (*Prunus serotina*), black walnut (*Juglans nigra*), hackberry (*Celtis occidentalis*), and cottonwood (*Populus deltoides*). Dominant grass species in the lawn and roadsides include smooth brome (*Bromus inermis*), tall fescue (*Schedonorus arundinaceus*), bluegrass (*Poa pratensis*), white clover (*Trifolium repens*), and dandelion (*Taraxacum officinale*). Agricultural crops at the time of the field investigation were soybeans (*Glycine max*). Avoidance alternatives are not practical since the project is an intersection reconstruction project. The requirement for habitat mitigation is not anticipated.

Early Coordination requests were sent to the Indiana Department of Natural Resources, Division of Fish and Wildlife (IDNR-DFW) and United States Fish and Wildlife Service (USFWS) on May 7, 2018, as these agencies have jurisdiction over habitat or may have related concerns. Listed below are indications of agency responses received and references to the Appendix pages where the received responses may be found:

- IDNR-DFW, June 6, 2018, Appendix C, pages 20 to 22
- USFWS, May 16, 2018, Appendix C, pages 23 to 25

IDNR-DFW and USFWS provided recommendations regarding minimization of vegetation impacts, protection and revegetation of disturbed areas, and seasonal tree cutting restrictions in order to minimize terrestrial habitat impacts.

All applicable agency recommendations are included in the Environmental Commitments section of this CE document.

If there are high incidences of animal movements observed in the project area, or if bridges and other areas appear to be the sole corridor for animal movement, consideration of utilizing wildlife crossings should be taken.

Karst

Is the proposed project located within or adjacent to the potential Karst Area of Indiana?

If yes, are karst features located within or adjacent to the footprint of the proposed project?

If yes, will the project impact any of these karst features?

Yes

No

X

Use the remarks box to identify any karst features within the project area. (Karst investigation must comply with the Karst MOU, dated October 13, 1993).

Remarks:

Based on a desktop review, the project is located outside the designated karst region of Indiana as outlined in the October 13, 1993 Memorandum of Understanding (MOU). According to the topo map of the project area (Appendix B, page 2), and the RFI report (Appendix E, page 8), there are no karst features identified within or adjacent to the project area. In the early coordination response, the Indiana Geological Survey (IGS) did not indicate that karst features may exist in the project area (Appendix C, page 13).

The IGS Environmental Assessment Report noted the following in the general vicinity of the project:

- Geological Hazards: moderate liquefaction potential and floodway
- Mineral Resources: bedrock resource - high potential, and sand and gravel resource - low potential
- Active or abandoned mineral resources extraction sites: petroleum exploration wells

Response from IGS has been communicated with the designer on May 2, 2019. No impacts are expected.

Presence

Impacts

Threatened or Endangered Species

Within the known range of any federal species

Any critical habitat identified within project area

Federal species found in project area (based upon informal consultation)

State species found in project area (based upon consultation with IDNR)

X

Yes

No

X

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Is Section 7 formal consultation required for this action? Yes ☐ No ☒

Remarks:

Based on a desktop review and the RFI report (Appendix E, pages 1 to 13), completed by DLZ on June 17, 2019, the IDNR Hamilton Endangered, Threatened and Rare (ETR) Species List has been checked and is included in (Appendix E, pages 12 to 13). The highlighted species on the list reflect the federal and state identified ETR species located within the county. According to the IDNR-DFW early coordination response letter dated June 6, 2018 (Appendix C, pages 20 to 22), the Natural Heritage Program's Database has been checked and to date no plant or animal species listed as state or federally threatened, endangered, or rare have been reported in the project vicinity.

Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 26 to 32). The project is within range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (NLEB) (*Myotis septentrionalis*). No additional species were found within or adjacent to the project area other than the Indiana bat and northern long-eared bat.

The project qualifies for the *Range-wide Programmatic Informal Consultation for the Indiana bat and northern long-eared bat (NLEB)*, dated May 2016 (revised February 2018), between FHWA, Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and USFWS. An effect determination key was completed on April 19, 2019, and based on the responses provided, the project was found to "may affect – not likely to adversely affect" the Indiana bat and/or the NLEB (Appendix C, pages 33 to 48). INDOT reviewed and verified the effect finding on April 22, 2019, and requested USFWS's review of the finding (Appendix C, page 49). No response was received from USFWS within the 14-day review period; therefore, it was concluded they concur with the finding. Avoidance and Mitigation Measures (AMMs) are included as firm commitments in the *Environmental Commitments* section of this document.

The RFI report was approved on June 17, 2019 (Appendix E, pages 1 to 13). Project information was submitted through the USFWS's Information for Planning and Consultation (IPaC) portal, and an official species list was generated (Appendix C, pages 26 to 32). This project is located outside a High Potential Zone for the Rusty Patched Bumble Bee. Therefore, no impacts are expected.

This precludes the need for further consultation on this project as required under Section 7 of the Endangered Species Act, as amended. If new information on endangered species at the site becomes available, or if project plans are changed, USFWS will be contacted for consultation.

SECTION B – OTHER RESOURCES

Drinking Water Resources

Wellhead Protection Area
Public Water System(s)
Residential Well(s)
Source Water Protection Area(s)
Sole Source Aquifer (SSA)

Presence

X
X
X

Impacts

Yes	No
	X
	X
	X

If a SSA is present, answer the following:

Is the Project in the St. Joseph Aquifer System?
Is the FHWA/EPA SSA MOU Applicable?
Initial Groundwater Assessment Required?
Detailed Groundwater Assessment Required?

Yes

No

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Remarks:

The project is located in Hamilton County, which is not located within the area of the St. Joseph Sole Source Aquifer, the only legally designated sole source aquifer in the state of Indiana. Therefore, the FHWA/EPA Sole Source Aquifer Memorandum of Understanding (MOU) is not applicable to this project. Therefore a detailed groundwater assessment is not needed and no impacts are expected.

The Indiana Department of Environmental Management's Wellhead Proximity Determinator website (<http://www.in.gov/idem/cleanwater/pages/wellhead/>) was accessed on October 30, 2019 by DLZ. This project is not located within a Wellhead Protection Area. However, the project is within the Citizens Water Indianapolis's Source Water Assessment Area (SWAA).

Coordination regarding the SWAA was conducted with Citizens Energy Group on November 4, 2019 (Appendix C, pages 50 to 51). Citizens Energy Group requested that protective measures be in place to prevent any fuel or chemicals that are utilized for construction activities from entering Cool Creek. A response provided to Citizens Energy Group indicated that the project will include protective measures including adherence to stormwater best management practices, INDOT standard specifications, and the material handling and spill prevention plan prepared as part of the SWPPP/Rule 5 Permit. Citizens Energy Group agreed with the protective measures and did not express any further concerns relating to the SWAA.

The Indiana Department of Natural Resources Water Well Record Database website (<https://www.in.gov/dnr/water/3595.htm>) was accessed on May 2, 2019 by DLZ. A well is located in the southwest quadrant of Grassy Branch Road and 191st Street. This feature will not be affected because it is not located in the proposed right-of-way. Therefore, no impacts are expected. Should it be determined during the right-of-way phase that this well is affected, a cost to cure will likely be included in the appraisal to restore the well.

Based on a desktop review of the INDOT MS4 website (<https://entapps.indot.in.gov/MS4/>) by DLZ on May 2, 2019, and the RFI report; this project is located in an Urban Area Boundary (UAB) location. An early coordination letter was sent on May 2, 2019, to the City of Westfield MS4 Coordinator. The MS4 coordinator did not respond within the 30-day time frame.

Based on a desktop review, a site visit on November 7, 2017 by DLZ, and the aerial map of the project area (Appendix B, page 3), this project is located where there is a public water system. The public water system will not be affected because the water line has been identified and will be avoided by construction activities. An early coordination letter was sent on date May 3, 2018 to Citizens Energy Group and no utility conflicts were identified. Utility coordination is ongoing and will continue through Stage 3 plan development. There are no other public/private water utilities in the project area; therefore, the project is not anticipated to result in impacts upon public drinking water supplies.

Flood Plains

Longitudinal Encroachment

Transverse Encroachment

Project located within a regulated floodplain

Homes located in floodplain within 1000' up/downstream from project

Presence

X
X

Impacts

Yes	No
X	
X	

Discuss impacts according to classification system described in the "Procedural Manual for Preparing Environmental Studies".

Remarks:

Based on a desktop review of The Indiana Department of Natural Resources Indiana Floodway Information Portal website (<http://dnrmmaps.dnr.in.gov/appsphp/fdms/>) by DLZ on May 7, 2019, and the RFI report; this project is located in a regulatory floodplain as determined from approved IDNR floodplain maps (Appendix F, page 29). An early coordination letter was sent on May 7, 2019, to the local Floodplain Administrator. The floodplain administrator did not respond within the 30-day time frame.

This project qualifies as a Category 5 (because it is a new roundabout and includes a new stormwater outfall within the floodplain) per the current INDOT CE Manual, which states there will be no substantial impacts on

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natural and beneficial floodplain values; there will be no substantial change in flood risks; and there will be no substantial increase in potential for interruption or termination of emergency service or emergency evaluation routes; therefore, it has been determined that this encroachment is not substantial.

Farmland	<u>Presence</u>	<u>Impacts</u>	
		Yes	No
Agricultural Lands	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Prime Farmland (per NRCS)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Total Points (from Section VII of CPA-106/AD-1006* 147

**If 160 or greater, see CE Manual for guidance.*

See CE Manual for guidance to determine which NRCS form is appropriate for your project.

Remarks:

Based on a desktop review, a site visit on November 7, 2017 by DLZ, the aerial map of the project area (Appendix B, page 3), the project will convert 1.75 acres of farmland as defined by the Farmland Protection Policy Act. An early coordination letter was sent on April 30, 2019, to Natural Resources Conservation Services (NRCS). Coordination with NRCS resulted in a score of 147 on the NRCS-AD 1006 Form (Appendix C, page 19). NRCS's threshold score for significant impacts to farmland that result in the consideration of alternatives is 160. Since this project score is less than the threshold, no significant loss of prime, unique, statewide, or local important farmland will result from this project. No alternatives other than those previously discussed in this document will be investigated without reevaluating impacts to prime farmland.

SECTION C – CULTURAL RESOURCES

Minor Projects PA Clearance	Category	Type	INDOT Approval Dates	N/A
				<input checked="" type="checkbox"/>

Results of Research

Eligible and/or Listed Resource Present

Archaeology	<input type="checkbox"/>
NRHP Buildings/Site(s)	<input type="checkbox"/>
NRHP District(s)	<input type="checkbox"/>
NRHP Bridge(s)	<input type="checkbox"/>

Project Effect

No Historic Properties Affected ☒ No Adverse Effect ☐ Adverse Effect ☐

Documentation Prepared

Documentation (mark all that apply)

		ES/FHWA Approval Date(s)	SHPO Approval Date(s)
Historic Properties Short Report	<input type="checkbox"/>		
Historic Property Report	<input checked="" type="checkbox"/>	6/4/2018	7/9/2018
Archaeological Records Check/ Review	<input type="checkbox"/>		
Archaeological Phase Ia Survey Report	<input checked="" type="checkbox"/>	5/8/2018, 9/17/2019 (addendum)	7/9/2018, 10/23/2019 (addendum)
Archaeological Phase Ic Survey Report	<input type="checkbox"/>		
Archaeological Phase II Investigation Report	<input type="checkbox"/>		
Archaeological Phase III Data Recovery	<input type="checkbox"/>		
APE, Eligibility and Effect Determination	<input checked="" type="checkbox"/>	1/28/2019	3/4/2019
800.11 Documentation	<input checked="" type="checkbox"/>	1/28/2019	3/4/2019

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Memorandum of Agreement (MOA)

MOA Signature Dates (List all signatories)

Describe all efforts to document cultural resources, including a detailed summary of the Section 106 process, using the categories outlined in the remarks box. The completion of the Section 106 process requires that a Legal Notice be published in local newspapers. Please indicate the publication date, name of paper(s) and the comment period deadline. Likewise include any further Section 106 work which must be completed at a later date, such as mitigation or deep trenching.

Remarks:

Area of Potential Effect (APE):

The APE delineated for this project extends approximately 2,000 feet in each direction from the project end points to Shady Nook Road on the east, 186th Street on the south, Flippins Road on the west, and 196th Street on the north. (Appendix D, pages 32 to 34).

Coordination with Consulting Parties:

The Indiana Department of Natural Resources State Historic Preservation Officer (SHPO) was automatically included as a consulting party. On June 4, and June 7, 2018, potentially interested parties were invited to participate as consulting parties in the Section 106 review for the project. The invited parties are indicated in the table below.

Invited Section 106 Consulting Parties	Status
Hamilton County Board of Commissioners	No Response - Declined
Indiana Landmarks Central Regional Office	Accepted
Hamilton County Historical Society/ Museum of History	No Response – Declined
Hamilton County Historian	No Response – Declined
Hamilton County Genealogy Society	No Response – Declined
Westfield-Washington Historical Society	No Response – Declined
Hamilton County Highway Engineer	No Response – Declined
Indianapolis Metropolitan Planning Organization	No Response – Declined
Delaware Tribe of Oklahoma	No Response – Declined
Delaware Tribe of Indians, Oklahoma	No Response – Declined
Eastern Shawnee Tribe of Oklahoma	No Response – Declined
Miami Tribe of Oklahoma	Accepted
Peoria Tribe of Indians Oklahoma	No Response – Declined
Pokagon Band of Potawatomi Indians	No Response - Declined

Of the consulting parties listed, Indiana Landmarks Central Regional Office and the Miami Tribe of Oklahoma accepted the invitation to be a consulting party. Consulting party correspondence is provided in Appendix D, pages 50 to 54.

Archaeology:

NS Services, LLC completed an archaeological records check and Phase 1a Archaeological Field Reconnaissance (2018) of the project area. The Phase 1a report notes that the archaeological reconnaissance located no archaeological sites within the project area and recommended that the project be allowed to proceed as planned. The report was approved by INDOT's Cultural Resources Office (CRO) on May 8, 2018. The report was provided to the SHPO for review and comment on June 4, 2018. In a letter dated July 9, 2018, the SHPO concurred with the archaeological report's recommendations (Appendix D, pages 53 and 54). An addendum to the Phase 1a Archaeological Field Reconnaissance was prepared and is discussed in the "Added Detention Basin" discussion below.

Historic Properties:

The Historic Property Report (HPR) prepared for this project (H&H Associates, LLC, 2018) noted that no properties listed in the NRHP are located within the APE, and recommended that no properties eligible for listing in the NRHP are present within the APE. INDOT's CRO released the HPR for distribution to all

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consulting parties on June 4, 2018. DLZ provided the HPR to the SHPO for review and comment, also on June 4, 2018. In a letter dated July 9, 2018 the SHPO concurred with the HPR's recommendations regarding the APE and the NRHP eligibility of properties within the APE for listing in the NRHP (Appendix D, pages 53 and 54).

Documentation, Findings:

Because no historic properties were identified within the APE, a finding of No Historic Properties Affected was made. On January 28, 2019, INDOT's CRO, acting on FHWA-IN's behalf, issued a finding of No Historic Properties Affected for this undertaking. The SHPO concurred with the finding in a letter dated March 4, 2019 (Appendix D, pages 58 and 59).

Public Involvement:

Views of the public pertaining to the INDOT CRO/Federal Highway Administration (FHWA) Finding of No Historic Properties Affected were sought through publication of a legal notice in the Indianapolis Star newspaper (February 2, 2019). Comments were requested within 30 days of the publication date. No comments were received. The affidavit for publication of the legal notice is presented as Appendix D, pages 55 to 57.

Added Detention Basin:

After the Section 106 process was completed, it was determined that minor project modifications were required to add a stormwater basin along the west side of Grassy Branch Road south of the intersection. The APE for above-ground resources was sufficient to account for the additional effects of the proposed changes and therefore was not increased. However, project activities would extend beyond the limits of the original archaeological investigation. An Addendum to the Phase 1a Archaeological Field Reconnaissance (NS Services, LLC, 2019) was prepared for the additional right-of-way required for the project. During this process, the limits of the previous archaeological report were evaluated and expanded as needed to match the proposed right-of-way limits along each approach. The Addendum Phase 1a was approved by INDOT and submitted to the SHPO and tribal consulting parties on September 17, 2019 (Appendix D, page 60 to 62). In a letter dated October 23, 2019 (Appendix D, pages 63 and 64) the SHPO agreed that in regard to buildings and structures, the project modifications will not expand the area of potential effects and will not require additional survey. SHPO also concurred that no further archaeological investigations appear necessary. SHPO agreed that the January 28, 2019 finding of "No Historic Properties Affected" is still valid in this case. No tribal consulting party comments were received.

The Section 106 process has been completed and FHWA's Section 106 responsibilities have been fulfilled.

SECTION D – SECTION 4(f) RESOURCES / SECTION 6(f) RESOURCES

Section 4(f) Involvement (mark all that apply)

Parks & Other Recreational Land

Publicly owned park
Publicly owned recreation area
Other (school, state/national forest, bikeway, etc.)

Presence

Use

Yes	No

**Evaluations
Prepared**

Programmatic Section 4(f)*
"De minimis" Impact*
Individual Section 4(f)

**FHWA
Approval date**

--

Wildlife & Waterfowl Refuges

National Wildlife Refuge

Presence

--

Use

Yes	No

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National Natural Landmark
State Wildlife Area
State Nature Preserve

Evaluations Prepared

Programmatic Section 4(f)*
"De minimis" Impact*
Individual Section 4(f)

FHWA Approval date

--

Presence

Use

Yes

No

Historic Properties

Sites eligible and/or listed on the NRHP

--

--

--

Evaluations Prepared

Programmatic Section 4(f)*
"De minimis" Impact*
Individual Section 4(f)

FHWA Approval date

--

*FHWA approval of the environmental document also serves as approval of any Section 4f Programmatic and/or De minimis evaluation(s) discussed below.

Discuss Programmatic Section 4(f) and "de minimis" Section 4(f) impacts in the remarks box below. Individual Section 4(f) documentation must be separate Draft and Final documents. For further discussions on Programmatic, "de minimis" and Individual Section 4(f) evaluations please refer to the "Procedural Manual for the Preparation of Environmental Studies". Discuss proposed alternatives that satisfy the requirements of Section 4(f).

Remarks:

Section 4(f) of the U.S. Department of Transportation Act of 1966 prohibits the use of certain public and historic lands for federally funded transportation facilities unless there is no feasible and prudent alternative. The law applies to significant publicly owned parks, recreation areas, wildlife / waterfowl refuges, and NRHP eligible or listed historic properties regardless of ownership. Lands subject to this law are considered Section 4(f) resources.

Based on a desktop review, a site visit on November 7, 2017 by DLZ, the aerial map of the project area (Appendix B, page 3), the Section 106 Finding of No Historic Properties Affected, and the RFI report (Appendix E, page 7), there are eight potential Section 4(f) resources located within the 0.5 mile search radius. These eight are all trail segments. There are four located within or adjacent to the project area. These four all are identified as planned trails by the City of Westfield and are located along both the east and west sides of Grassy Branch Road and both the north and south sides of 191st Street through the project area.

The Hamilton County GIS website (<https://gis1.hamiltoncounty.in.gov/GeneralViewer/>) was accessed to determine whether the City of Westfield Parks and Recreation Department owns an easement or right of way in this area. The existing right-of-way of both roadways is owned by Hamilton County and land adjacent to the right-of-way is privately owned. Because the City of Westfield Parks and Recreation Department does not own an easement or right of way, the planned trail does not meet the definition of a planned Section 4(f) resource per the FHWA Section 4(f) Policy Paper (<https://www.environment.fhwa.dot.gov/legislation/section4f/4fpolicy.aspx>). The project will not impact the future development of these planned trails. Therefore, no impacts are expected.

The project will connect to a new trail east of the project being constructed as part of a new residential development. This connection has been coordinated with the City of Westfield (Appendix C, page 52). In addition, the City of Westfield indicated that no trail connection west of this project is planned at this time.

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Section 6(f) Involvement

Presence

Use

Yes

No

Section 6(f) Property

☐
☐
☐

Discuss proposed alternatives that satisfy the requirements of Section 6(f). Discuss any Section 6(f) involvement.

Remarks:

The U.S. Land and Water Conservation Fund Act of 1965 established the Land and Water Conservation Fund (LWCF), which was created to preserve, develop, and assure accessibility to outdoor recreation resources. Section 6(f) of this Act prohibits conversion of lands purchased with LWCF monies to a non-recreation use.

A review of 6(f) properties on the Land and Water Conservation Fund (LWCF) website at <https://www.lwcfcoalition.com/tools> revealed a total of eleven properties in Hamilton County (Appendix J, page 1). None of these properties are located within or adjacent to the project area. Therefore, there will be no impacts to 6(f) resources as a result of this project.

SECTION E – Air Quality

Air Quality

Conformity Status of the Project

Is the project in an air quality non-attainment or maintenance area?

Yes

No

☒
☐

If YES, then:

Is the project in the most current MPO TIP?

☒
☐

Is the project exempt from conformity?

☐
☒

If the project is NOT exempt from conformity, then:

Is the project in the Transportation Plan (TP)?

☒
☐

Is a hot spot analysis required (CO/PM)?

☐
☒

Level of MSAT Analysis required?

Level 1a ☒ Level 1b ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Level 5 ☐

Remarks:

This project is included in the Fiscal Year (FY) 2020-2024 Indianapolis Metropolitan Planning Organization Transportation Improvement Program (MPO TIP) and Statewide Transportation Improvement Program (STIP) (Appendix H, pages 1 to 2).

This project is located in Hamilton County, which is currently a maintenance area for Ozone, under the 1997 Ozone 8-hour standard which was revoked in 2015 but is being evaluated for conformity due to the February 16, 2018, South Coast Air Quality Management District V. Environmental Protection Agency, Et. Al. Decision. The project's design concept and scope are accurately reflected in both the Indianapolis Metropolitan Planning Organization Transportation Plan (TP) and the Transportation Improvement Program (TIP) and both conform to the State Implementation Plan (SIP). Therefore, the conformity requirements of 40 CFR 93 have been met.

This project is of a type qualifying as a categorical exclusion (Group 1) under 23 CFR 771.117(c), or exempt under the Clean Air Act conformity rule under 40 CFR 93.126, and as such, a Mobile Source Air Toxics analysis is not required.

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SECTION F - NOISE

Noise

Yes No

Is a noise analysis required in accordance with FHWA regulations and INDOT's traffic noise policy? ☐ ☒

No Yes/ Date

ES Review of Noise Analysis

Remarks:

This project is a Type III project. In accordance with 23 CFR 772 and the current *Indiana Department of Transportation Traffic Noise Analysis Procedure*, this action does not require a formal noise analysis.

SECTION G – COMMUNITY IMPACTS

Regional, Community & Neighborhood Factors

Will the proposed action comply with the local/regional development patterns for the area?

Yes No

☒ ☐

Will the proposed action result in substantial impacts to community cohesion?

☐ ☒

Will the proposed action result in substantial impacts to local tax base or property values?

☐ ☒

Will construction activities impact community events (festivals, fairs, etc.)?

☐ ☒

Does the community have an approved transition plan?

☒ ☐

If No, are steps being made to advance the community's transition plan?

☐ ☐

Does the project comply with the transition plan? (explain in the remarks box)

☒ ☐

Remarks:

No negative regional, community or neighborhood impacts are anticipated. Positive impacts are expected due to improved level of service of the intersection and the addition of the pedestrian trail and crosswalks. Access to all properties within the project area will be maintained during construction. Therefore, no negative impacts are expected.

The Indiana State Festivals Association website (<http://www.indianafestivals.org>) did not identify any planned festivals within the project area. No impacts upon festivals are expected.

With regard to compliance with the approved transition plan (Hamilton County, 2013), the project involves construction of ADA compliant pedestrian facilities and is therefore in compliance.

Indirect and Cumulative Impacts

Yes No

Will the proposed action result in substantial indirect or cumulative impacts?

☐ ☒

Remarks:

Indirect impacts are effects which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate. Cumulative impacts affect the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions.

Land use changes are occurring in the project area including new residential developments in formerly agricultural areas. The multiuse trail will connect to a new trail to the east that is being constructed as part of a new residential development. The western connection to the trail is not known at this time but it is foreseeable that a future development will connect to this multiuse trail. The land use changes in the area not caused by the project. The project will not result in foreseeable indirect or cumulative impacts. The project will not affect access to abutting and nearby parcels in the long term, nor will it affect future changes in land use in the area.

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Public Facilities & Services

Will the proposed action result in substantial impacts on health and educational facilities, public and private utilities, emergency services, religious institutions, airports, public transportation or pedestrian and bicycle facilities? *Discuss how the maintenance of traffic will affect public facilities and services.*

Yes

☐

No

☒

Remarks:

Based on a desktop review, a site visit on November 7, 2017 by a DLZ Environmental Scientist, the aerial map of the project area (Appendix B, page 3) and the RFI report (Appendix E, page 7), there is one pipeline, eight trails, and one religious facility located within the 0.5 mile of the project. The pipeline, trails and religious facility are within the project area.

The pipeline is a Marathon Gas Company pipeline that crosses Grassy Branch Road south of the intersection. Utility coordination has been conducted and is ongoing with Marathon Gas Company. Therefore, no impacts to the pipeline are expected.

The trails identified in the RFI are planned City of Westfield trails. These have not been constructed and there are currently no rights-of-way or easements secured for future development of these trails. The project will not result in impacts to these planned trails or prevent these trails from being developed in the future. Therefore, no impacts are expected to the planned trails.

The religious facility (Crossroads Church at Westfield) is located in the northeast quadrant of the intersection. The project will require approximately 1.11 acres of right-of-way acquisition from the lawn of this property. Access to this religious facility will be maintained during construction. Therefore, no impacts are expected to the religious facility's services. A project commitment has been made to notify the Crossroads Church at Westfield at least two weeks prior to any construction that would block or limit access.

In a May 18, 2018 Early Coordination response (Appendix C, page 16), the INDOT Department of Aviation indicated that the Westfield Airport is located approximately 2.4 nautical miles southeast of the proposed project site. An Indiana Tall Structure permit would not be required unless the project involves the construction of a temporary (e.g., crane) or permanent structure that penetrates a 100:1 slope from the nearest point of the Westfield Airport runway. The project will not involve a permanent or temporary structure that penetrates 100:1 slope (or approximately 145 feet above ground level.) Therefore, no impacts upon the Westfield Airport or airspace are expected.

It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access.

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Environmental Justice (EJ) (Presidential EO 12898)

During the development of the project were EJ issues identified?

Does the project require an EJ analysis?

If YES, then:

Are any EJ populations located within the project area?

Will the project result in adversely high or disproportionate impacts to EJ populations?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Remarks:

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT Categorical Exclusion Manual, an Environmental Justice (EJ) Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way. The project will not require any relocations; however, it will require greater than 0.5 acre of additional permanent right-of-way. Therefore, an EJ Analysis is required.

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exists and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Hamilton County, Indiana. The community that overlaps the project area is called the affected community (AC). In this project, the AC is Census Tract 1105.07. An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the 2013 to 2017 American Community Survey (ACS) 5-year estimates was obtained from the US Census Bureau Website <https://factfinder.census.gov/> on October 11, 2019 by DLZ. The data collected for minority and low-income populations within the AC are summarized in the below table.

Table: Minority and Low-Income Data (2012-2016 American Community Survey 5-Year Estimates)		
	COC - (Hamilton County, Indiana)	AC-1 - (Census Tract 1105.07, Hamilton County, Indiana)
Percent Minority	15.54%	9.97%
125% of COC	19.42%	AC < 125% COC
EJ Population of Concern		No
Percent Low-Income	4.98%	3.52%
125% of COC	6.22%	AC < 125% COC
EJ Population of Concern		No

AC-1, Census Tract 1105.07, Hamilton County, Indiana has a percent minority of 9.97% which is below 50% and is below the 125% COC threshold. Therefore, AC-1 does not contain minority populations of EJ concern.

AC-1, Census Tract 1105.07, Hamilton County, Indiana has a percent low-income of 3.52% which is below 50% and is below the 125% COC threshold. Therefore, AC-1 does not contain low-income populations of EJ concern.

Conclusion

The census data sheets, map, and calculations can be found in Appendix I. No further environmental justice analysis is warranted.

Relocation of People, Businesses or Farms

Will the proposed action result in the relocation of people, businesses or farms?

Is a Business Information Survey (BIS) required?

Is a Conceptual Stage Relocation Study (CSRS) required?

Has utility relocation coordination been initiated for this project?

Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>

Number of relocations: Residences: 0 Businesses: 0 Farms: 0 Other: N/A

This is page 22 of 26 Project Name: 191st Street/Grassy Branch Road Roundabout Date: March 16, 2020

Indiana Department of Transportation

County Hamilton Route 191st Street/Grassy Branch Road Des. No. 1700731

If a BIS or CSRS is required, discuss the results in the remarks box.

Remarks: No relocations of people, businesses, or farms will take place as a result of this project.

Utility relocations are anticipated. Utility coordination is ongoing by DLZ and will continue through Stage 3 plan development.

SECTION H – HAZARDOUS MATERIALS & REGULATED SUBSTANCES

Documentation

Hazardous Materials & Regulated Substances (Mark all that apply)

Red Flag Investigation	X
Phase I Environmental Site Assessment (Phase I ESA)	
Phase II Environmental Site Assessment (Phase II ESA)	
Design/Specifications for Remediation required?	

	No	Yes/Date
ES Review of Investigations		Yes/June 17, 2019

Include a summary of findings for each investigation.

Remarks: Based on a review of GIS and available public records, an RFI was completed on June 17, 2019 by DLZ (Appendix E, page 11). One NPDES facility is located within 0.5 mile of the project area, and none are located within the project area; however, no hazmat sites were identified in or within 0.5 mile of the project area that will impact the project. The nearest NPDES facility is 0.49 mile from the project area. No impacts are expected because of distance. Further investigation for hazardous material concerns is not required at this time.

SECTION I – PERMITS CHECKLIST

Permits (mark all that apply)

Likely Required

Army Corps of Engineers (404/Section10 Permit)

Individual Permit (IP)	
Nationwide Permit (NWP)	
Regional General Permit (RGP)	X
Pre-Construction Notification (PCN)	
Other	
Wetland Mitigation required	
Stream Mitigation required	

IDEM

Section 401 WQC	X
Isolated Wetlands determination	
Rule 5	X
Other	
Wetland Mitigation required	
Stream Mitigation required	

IDNR

Construction in a Floodway	
Navigable Waterway Permit	
Lake Preservation Permit	
Other	
Mitigation Required	

US Coast Guard Section 9 Bridge Permit

--

Indiana Department of Transportation

County Hamilton Route 191st Street/Grassy Branch Road Des. No. 1700731

Others (Please discuss in the remarks box below)

☐

Remarks: The proposed work is anticipated to disturb more than one acre; therefore, it will be necessary for IDEM to issue a Rule 5 permit.

The project will result in impacts to jurisdictional surface water and will require a Section 401 Water Quality Certification (IDEM) and Section 404/Section 10 permit (USACE).

Applicable recommendations provided by the USACE and IDEM are included in the Environmental Commitments section of this document. If permits are found to be necessary, the conditions of the permit will be requirements of the project and will supersede these recommendations.

It is the responsibility of the project sponsor to identify and obtain all required permits.

SECTION J- ENVIRONMENTAL COMMITMENTS

The following information should be provided below: List all commitments, name of agency/organization requesting the commitment(s), and indicating which are firm and which are for further consideration. The commitments should be numbered.

Remarks: **Firm:**

1. If the scope of work or permanent or temporary right-of-way amounts change, the INDOT Environmental Services Division (ESD) and the INDOT District Environmental Section will be contacted immediately. (INDOT ESD and INDOT District)
2. It is the responsibility of the project sponsor to notify school corporations and emergency services at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
3. It is the responsibility of the project sponsor to notify the Crossroads Church at Westfield at least two weeks prior to any construction that would block or limit access. (INDOT ESD)
4. The section corner at the intersection will need to be perpetuated by the road project (Hamilton County Surveyor)
5. General AMM 1: Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs. (USFWS)
6. Lighting AMM 1: Direct temporary lighting away from suitable habitat during the active season. (USFWS)
7. Lighting AMM 2: When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable. (USFWS)
8. Tree Removal AMM 1: Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal. (USFWS)
9. Tree Removal AMM 2: Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/ rail surface and outside of documented roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed. (USFWS)
10. Tree Removal AMM 3: Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored

Indiana Department of Transportation

County Hamilton Route 191st Street/Grassy Branch Road Des. No. 1700731

flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits). (USFWS)

11. Tree Removal AMM 4: Do not remove documented Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or documented foraging habitat any time of year. (USFWS)

For Further Consideration:

1. Use pollutant-trapping technology such as storm drain inserts, etc. to reduce runoff of urban pollutants directly to the stream system. (USFWS)
2. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap. (USFWS)
3. Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottomed culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community. (USFWS)
4. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If rip rap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat. (USFWS)
5. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams. (USFWS)
6. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing. (USFWS)
7. Lighting: The Division of Fish and Wildlife strongly encourages visiting the International Dark-Sky Association's website to learn more about the potential negative impacts of improperly selected LED lighting systems, if required: [http://darksky.org/lighting/-led-practical guide/](http://darksky.org/lighting/-led-practical-guide/). (IDNR)
8. Drainage Improvements: The Division of Fish and Wildlife recommends considering a more sustainable approach to stormwater management for transportation corridor project such as using storage techniques (retention basins, constructed wetlands, raingardens, etc.), recharging groundwater using infiltration techniques (infiltration basins or trenches, pervious pavement, etc.), and reusing runoff for irrigation elsewhere in the basin. (IDNR)
9. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 to September 30. (IDNR)
10. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure. (IDNR)
11. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds. (IDNR)
12. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids. (IDNR)

Indiana Department of Transportation

County Hamilton Route 191st Street/Grassy Branch Road Des. No. 1700731

13. The sideslopes of the outlet section must be 2:1 or flatter. (IDNR)
14. Protect the area around and below any concentrated discharge points, down to the waterway's normal flow level, with appropriate structural armament such as riprap. (IDNR)

SECTION K- EARLY COORDINATION

Please list the date coordination was sent and all agencies that were contacted as a part of the development of this Environmental Study. Also, include the date of their response or indicate that no response was received. INDOT and FHWA are automatically considered early coordination participants and should only be listed if a response is received.

Remarks:

Agency/Party	Response Date(s)
Federal and State Natural Resource/Regulatory Agencies - Sent 5/7/2018	
USDA – Natural Resources Conservation Service	5/21/2018, 6/4/2019
Indiana Geological Survey	5/2/2019
IDNR Division of Fish and Wildlife	6/7/2018
INDOT – Aviation Section; Inter-Modal Transportation Division	5/18/2018
National Park Service	No Response
IDEM	10/17/2019
US Department of Housing and Urban Development	No Response
INDOT – Office of Communications	No Response
INDOT – Environmental Scoping Manager – Greenfield District	No Response
Louisville District, Corps of Engineers	No Response
USFWS	5/16/2018
USFWS Rangewide Programmatic Consultation – Species List	4/19/2019
USFWS Rangewide Programmatic Consultation – Concurrence Verification	4/22/2019
Citizens Energy Group – Source Water Assessment Area	11/4/2019
Local and County Agencies - Sent 5/7/2018	
Hamilton County Sheriff	No Response
Indianapolis Metropolitan Planning Organization (IMPO)	No Response
Hamilton County Commissioners	No Response
Westfield-Washington Schools	No Response
City of Westfield Fire Department	No Response
City of Westfield Police Department	No Response
Hamilton County Surveyor	5/10/2018
Mayor of Westfield	No Response
City of Westfield - Public Works	January 8, 2020

FHWA and INDOT are automatic consulting parties, thus they were sent copies of the Early Coordination materials on May 7, 2018. Early Coordination and other correspondence are presented in Appendix C.

**Roundabout Construction at 191st Street/Grassy Branch Road
Hamilton County, Indiana
Des. No. 1700731**

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APPENDIX A

INDOT Supporting Documentation



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix A

Categorical Exclusion Level Thresholds

	PCE	Level 1	Level 2	Level 3	Level 4 ¹
Section 106	Falls within guidelines of Minor Projects PA	"No Historic Properties Affected"	"No Adverse Effect"	-	"Adverse Effect" Or Historic Bridge involvement ²
Stream Impacts	No construction in waterways or water bodies	< 300 linear feet of stream impacts	≥ 300 linear feet of stream impacts	-	Individual 404 Permit
Wetland Impacts	No adverse impacts to wetlands	< 0.1 acre	-	< 1 acre	≥ 1 acre
Right-of-way³	Property acquisition for preservation only or none	< 0.5 acre	≥ 0.5 acre	-	-
Relocations	None	-	-	< 5	≥ 5
Threatened/Endangered Species (Species Specific Programmatic for Indiana bat & northern long eared bat)	"No Effect", "Not likely to Adversely Affect" (Without AMMs ⁴ or with AMMs required for all projects ⁵)	"Not likely to Adversely Affect" (With any other AMMs)	-	"Likely to Adversely Affect"	Project does not fall under Species Specific Programmatic
Threatened/Endangered Species (Any other species)	Falls within guidelines of USFWS 2013 Interim Policy	"No Effect", "Not likely to Adversely Affect"	-	-	"Likely to Adversely Affect"
Environmental Justice	No disproportionately high and adverse impacts	-	-	-	Potential ⁶
Sole Source Aquifer	Detailed Assessment Not Required	-	-	-	Detailed Assessment
Floodplain	No Substantial Impacts	-	-	-	Substantial Impacts
Coastal Zone Consistency	Consistent	-	-	-	Not Consistent
National Wild and Scenic River	Not Present	-	-	-	Present
New Alignment	None	-	-	-	Any
Section 4(f) Impacts	None	-	-	-	Any
Section 6(f) Impacts	None	-	-	-	Any
Added Through Lane	None	-	-	-	Any
Permanent Traffic Alteration	None	-	-	-	Any
Coast Guard Permit	None	-	-	-	Any
Noise Analysis Required	No	-	-	-	Yes
Air Quality Analysis Required	No	-	-	-	Yes ⁷
Approval Level <ul style="list-style-type: none"> District Env. Supervisor Env. Services Division FHWA 	Concurrence by INDOT District Environmental or Environmental Services	Yes	Yes	Yes Yes	Yes Yes Yes

¹Coordinate with INDOT Environmental Services. INDOT will then coordinate with the appropriate FHWA Environmental Specialist.

²Any involvement with a bridge processed under the Historic Bridge Programmatic Agreement.

³Permanent and/or temporary right-of-way.

⁴AMMs = Avoidance and Mitigation Measures.

⁵AMMs determined by the IPAC decision key to be needed that are listed in the USFWS User's Guide for the Range-wide Programmatic Consultation for Indiana bat and Northern long-eared bat as "required for all projects".

⁶Potential for causing a disproportionately high and adverse impact.

⁷Hot Spot Analysis and/or MSAT Quantitative Emission Analysis.

*Substantial public or agency controversy may require a higher-level NEPA document.

APPENDIX B

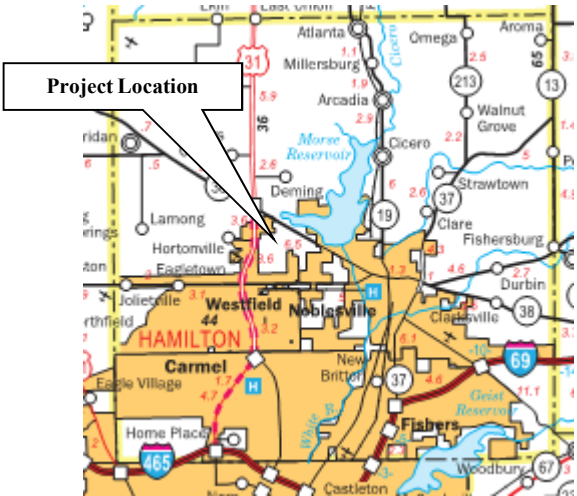
Graphics



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix B

Project Location Graphics



<http://maps.indiana.edu/>

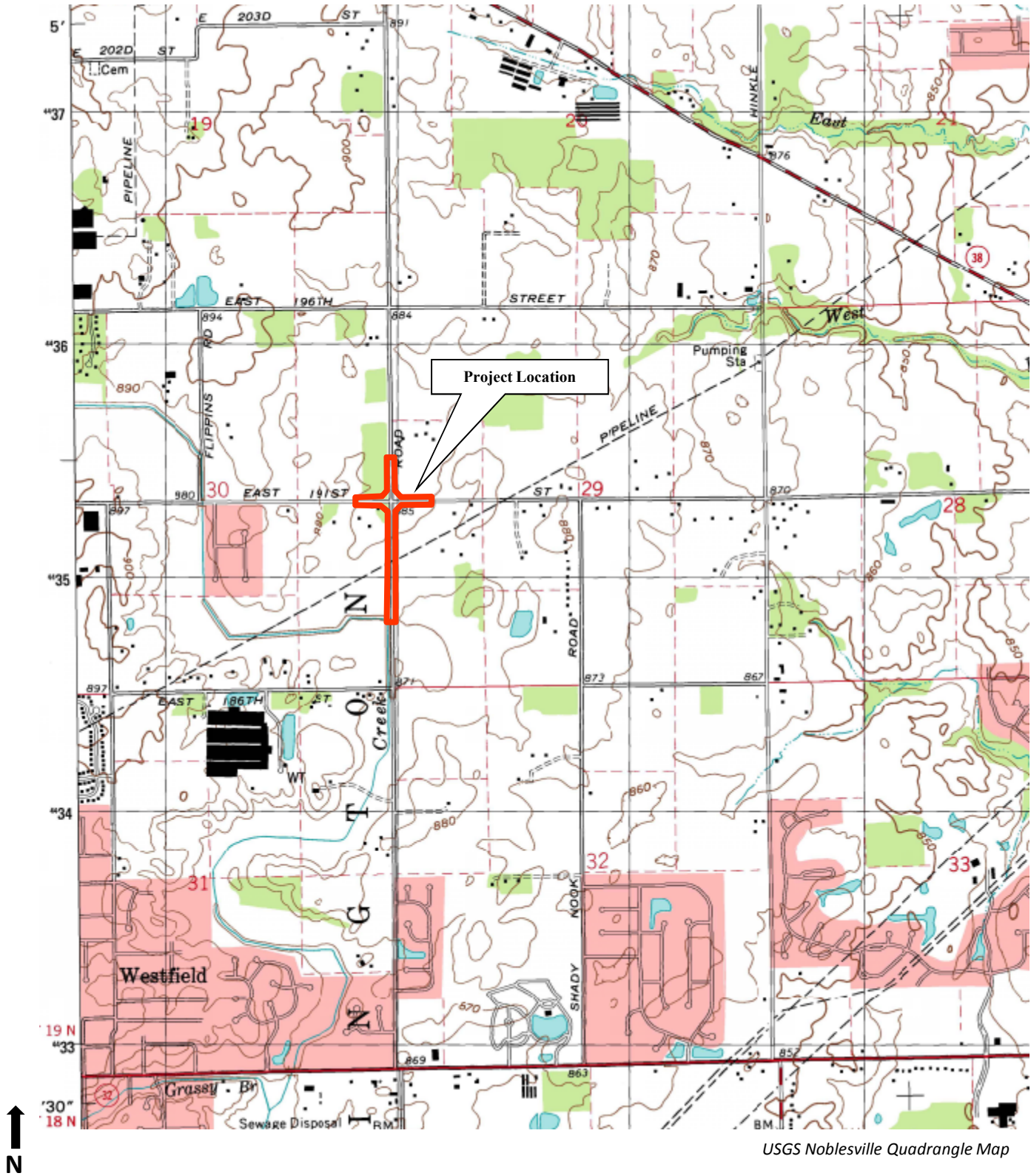


191st Street/Grassy Branch Road
Intersection Improvements
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Scale: NTS

Appendix B-1

USGS Quadrangle Map



USGS Noblesville Quadrangle Map



191st Street/Grassy Branch Road
Intersection Improvements
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Scale: 1"=2000'
Appendix B-2

Aerial Photograph and Photo Key



<http://maps.indiana.edu/>



191st Street/Grassy Branch Road
Intersection Improvements
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Scale: See Map

Appendix B-3

Photographs – 11/7/2017



1) Looking north along Grassy Branch Road from 191st St.



2) Looking east along 191st St. from Grassy Branch Rd.



3) Looking south along Grassy Branch Rd. from 191st St.



4) Looking west along 191st St. from Grassy Branch Rd.



5) Looking south along Grassy Branch Rd. toward Cool Creek
(also referred to as Wheeler and Beals Legal Drain)



6) Looking north at the pond feature in northeast quadrant
of the intersection



191st Street/Grassy Branch Road
Intersection Improvements
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Site
Photographs

Appendix B-4

Photographs – 11/7/2017



7) View south along Grassy Branch Rd. to intersection



8) View east toward the intersection along 191st St.



9) View north along Grassy Branch Rd. from south of the intersection



10) View south along Grassy Branch Road from south of the intersection



11) View west along 191st Street toward the intersection



12) View north along Grassy Branch Road from near the southern terminus



WATERS OF THE U.S. REPORT
191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Site
Photographs

Appendix B-5

PROJECT	DESIGNATION
1700731	1700731
CONTRACT	
R-40286	

INDIANA DEPARTMENT OF TRANSPORTATION



STAGE 3 PLANS
JANUARY 2020

ROAD PLANS

APPROVED BY:
HAMILTON COUNTY BOARD OF COMMISSIONERS

STEVE C. DILLINGER, PRESIDENT

MARK HEIRBRANDT, VICE PRESIDENT

CHRISTINE ALTMAN, COUNTY COMMISSIONER

HAMILTON COUNTY HIGHWAY DEPARTMENT

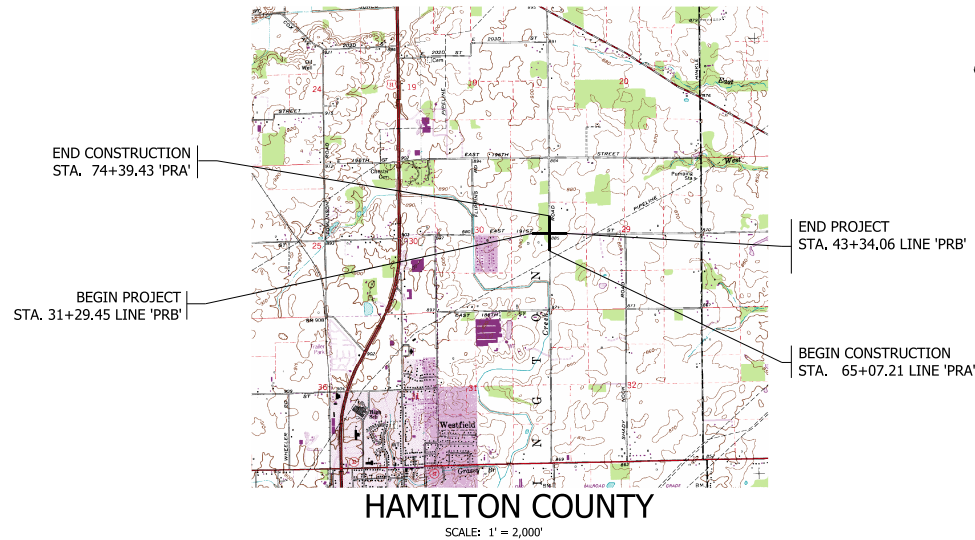
DAVID LUCAS, PROJECT COORDINATOR, ERC

ROUTE: 191ST STREET & GRASSY BRANCH ROAD PROJECT NO. 1700731 (X) P.E.

ADDITIONAL RIGHT-OF-WAY
REQUIRED FOR THIS PROJECT

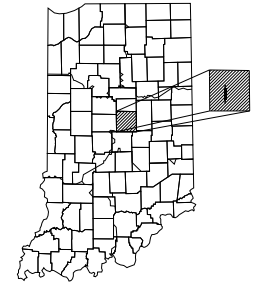
() R/W
() CONST.

Reconstruction of the Intersection of 191st Street and Grassy Branch Road. The Roadway Improvements Extend Along both 191st Street and Grassy Branch Road Approaches Approximately 500 feet in each direction from the intersection. Sections 29 & 30, T-19-N, R-4-W all in Hamilton County, Indiana



TRAFFIC DATA		
	191ST STREET	GRASSY BRANCH RD
A.A.D.T. (2016)	8,374 VPD	3,251 VPD
A.A.D.T. (2022 PROJECTED)	9,630 VPD	3,740 VPD
A.A.D.T. (2042 PROJECTED)	13,815 VPD	5,365 VPD
D.U.M.V. (2042 PROJECTED)	1,380 VPH	540 VPH
DIRECTIONAL DISTRIBUTION	60% E.B.,	55% N.B.
TRUCKS	2% AADT/DHV	2% AADT/DHV

DESIGN DATA		
DESIGN SPEED	50 M.P.H.	45 M.P.H.
4R-NEW CONSTRUCTION (NON-FREEWAY)	COLLECTOR	COLLECTOR
FUNCTIONAL CLASSIFICATION	COLLECTOR	COLLECTOR
RURAL/URBAN	URBAN	URBAN
TERRAIN	LEVEL	LEVEL
ACCESS CONTROL	NONE	NONE

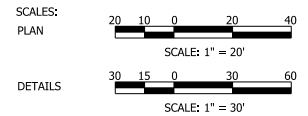


PROJECT LOCATION SHOWN BY
HAMILTON COUNTY

LATITUDE: 40°3'53.8" LONGITUDE: 86°6'33.3"

ROADWAY LENGTH: 0.423 MI.
TOTAL LENGTH: 0.647 MI.
MAX. GRADE: 2.0 %

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE SCALES BELOW MAY BE USED.



INDIANA D.O.T. STANDARDS DRAWINGS, AS LISTED IN THE STANDARD DRAWING INDEX EFFECTIVE SEPT 1, 2019 TO BE USED WITH THESE PLANS.
INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020 TO BE USED WITH THESE PLANS.

CERTIFIED BY:	REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA NO. COVERING OVERALL DESIGN	DATE
CERTIFIED BY:	REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA NO. COVERING CIVIL DESIGN	DATE
CERTIFIED BY:	REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA NO. COVERING	DATE

NOT FOR CONSTRUCTION	NOT FOR CONSTRUCTION	NOT FOR CONSTRUCTION
DLZ INDIANA, LLC	DLZ INDIANA, LLC	DLZ INDIANA, LLC



PLANS PREPARED BY:
DLZ INDIANA, LLC
157 East Maryland Street
Indianapolis, Indiana 46204
(317) 633-1120

APPROVED FOR LETTING: _____
INDIANA DEPARTMENT OF TRANSPORTATION DATE: _____

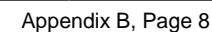
ROAD FILE	
DESIGNATION	1700731
SURVEY BOOK	SHEETS
ELECTRONIC	1 of 1 68
CONTRACT	PROJECT
R-40286	1700731

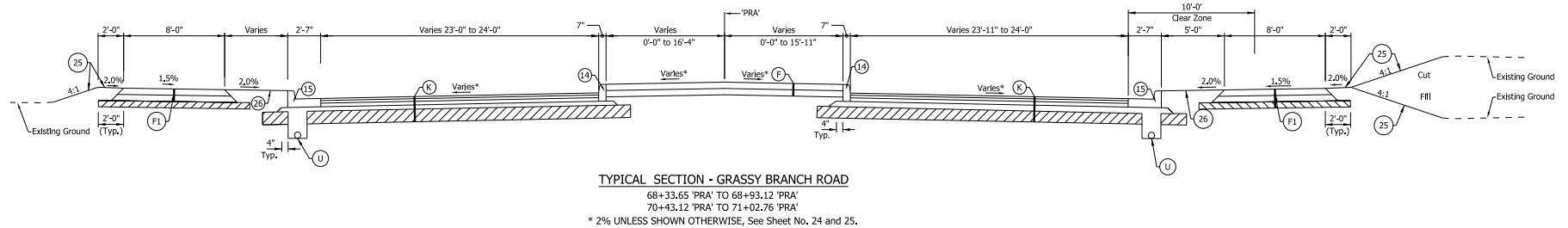
<p>CABLE Comcast Scott Evans (Telecom Placement, Inc.) (317) 752-6569</p>	<p>WATER & SEWER CRISPER Energy Group Robert Mashbaum 2150 Dr. Martin Luther King, Jr. Street Indianapolis, IN 46202 (317) 429-3961</p>
<p>COMMUNICATION Frontier Steve Costlow 20095 Hague Road Noblesville, IN 46062 (317) 984-9010</p>	<p>ELECTRIC Duke Energy Luis Alvarez 1619 W. Deffenbaugh Street Kokomo, IN 46902 (781) 966-5253</p>
<p>PIPELINE Marathon Pipe Line LLC Greg Newman 20-C Industrial Drive Ludington, OH 44804 (419) 564-8826</p>	

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SHEET NO.	SUBJECT
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9	GEOMETRICS
10	EDGE OF PAVEMENT GEOMETRICS
11	ROUNDABOUT LAYOUT PLAN
12-21	PLAN AND PROFILES SHEETS
22	BASIN DETAIL
23-24	SPOT DETAIL
25	PAVEMENT MARKING PLAN
26-27	SIGNING PLAN
28-29	EROSION CONTROL PLAN
30-31	SIGN TABLE
32-33	UNDERDRAIN TABLE
34-37	PIPE MATERIALS TABLE
38	MISCELLANEOUS TABLES
39	STRUCTURE DATA TABLE
40-68	CROSS SECTIONS

[illegible]

SCALE	ROAD FILE		
NONE	N/A		
	DESIGNATION		
	1700731		
SURVEY BOOK	SHEETS		
ELECTRONIC	2	of	68
CONTRACT	PROJECT		
R-60786	1700731		





- (F) 6" PCPP, on
6" Compacted Aggregate, No. 53
- (F1) 360 lbs/SYD HMA For Sidewalk Consisting of:
140 lbs/SYD HMA, Surface, Type 8, on
220 lb/SYD HMA, Intermediate, Type 8, on
6" Compacted Aggregate, No. 53, on
Subgrade Treatment, Type II
- (K) Millstone Pavement Section
220 lbs/SYD QC/Ca-HMA, 2, 70, Surface, 12.5 mm, on
220 lbs/SYD QC/Ca-HMA, 2, 70, Intermediate, 19.0 mm, on
385 lbs/SYD QC/Ca-HMA, 2, 64, Base, 19.0 mm on
3" Compacted Aggregate, Type II
Subgrade Treatment, Type ID
- (U) Underdrain, See Detail, Sheet 4
- (14) Curb Concrete
- (15) Curb & Gutter, Concrete
- (22) 7" PCPP, Colored & Jointed
(With 15' D-1 Joint Spacing and 1" Dowel Bars) on
12.5" Compacted Aggregate, No. 53, on
Subgrade Treatment Type ID
- (25) Seed Mixture, U
- (26) Sodding, Nursery



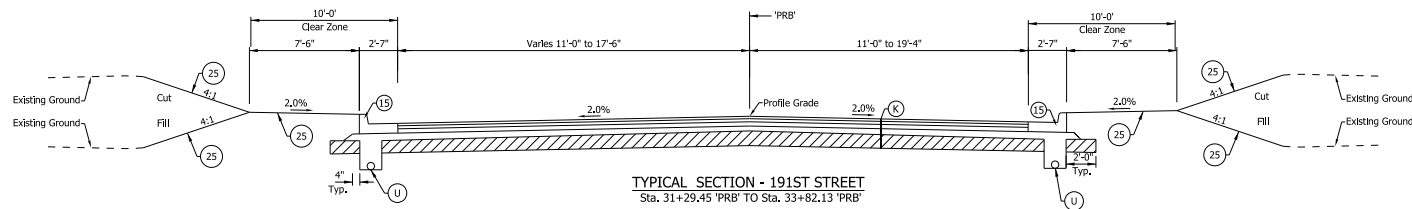
NOT FOR
CONSTRUCTION

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CHECKED: RAC	1/20/20	CHECKED: PH	1/20/20

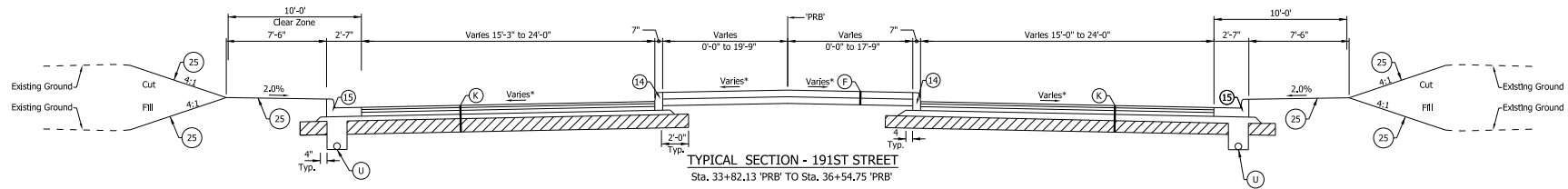
INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE	ROAD FILE		
1 / 4" = 1'-0"	N/A		
	DESIGNATION		
	1700731		
SURVEY BOOK	SHEETS		
ELECTRONIC	4	of	68
CONTRACT	PROJECT		
R-40286	1700731		



TYPICAL SECTION - 191ST STREET
Sta. 31+29.45 'PRB' TO Sta. 33+82.13 'PRB'



TYPICAL SECTION - 191ST STREET
Sta. 33+82.13 'PRB' TO Sta. 36+54.75 'PRB'

* 2% Unless Shown Otherwise
See Sheet No. 23 and 24.

LEGEND:

- (F) 6" PCCP, on
6" Compacted Aggregate, No. 53
- (K) Mainline Pavement Section
220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on
275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on
385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on
3" Compacted Aggregate No. 53
Subgrade Treatment, Type 1D
- (U) Underdrain, See Detail, Sheet 4
- (14) Curb Concrete
- (15) Curb & Gutter, Concrete
- (25) Seed Mixture, U

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NOT FOR
CONSTRUCTION
DLZ INDIANA, LLC

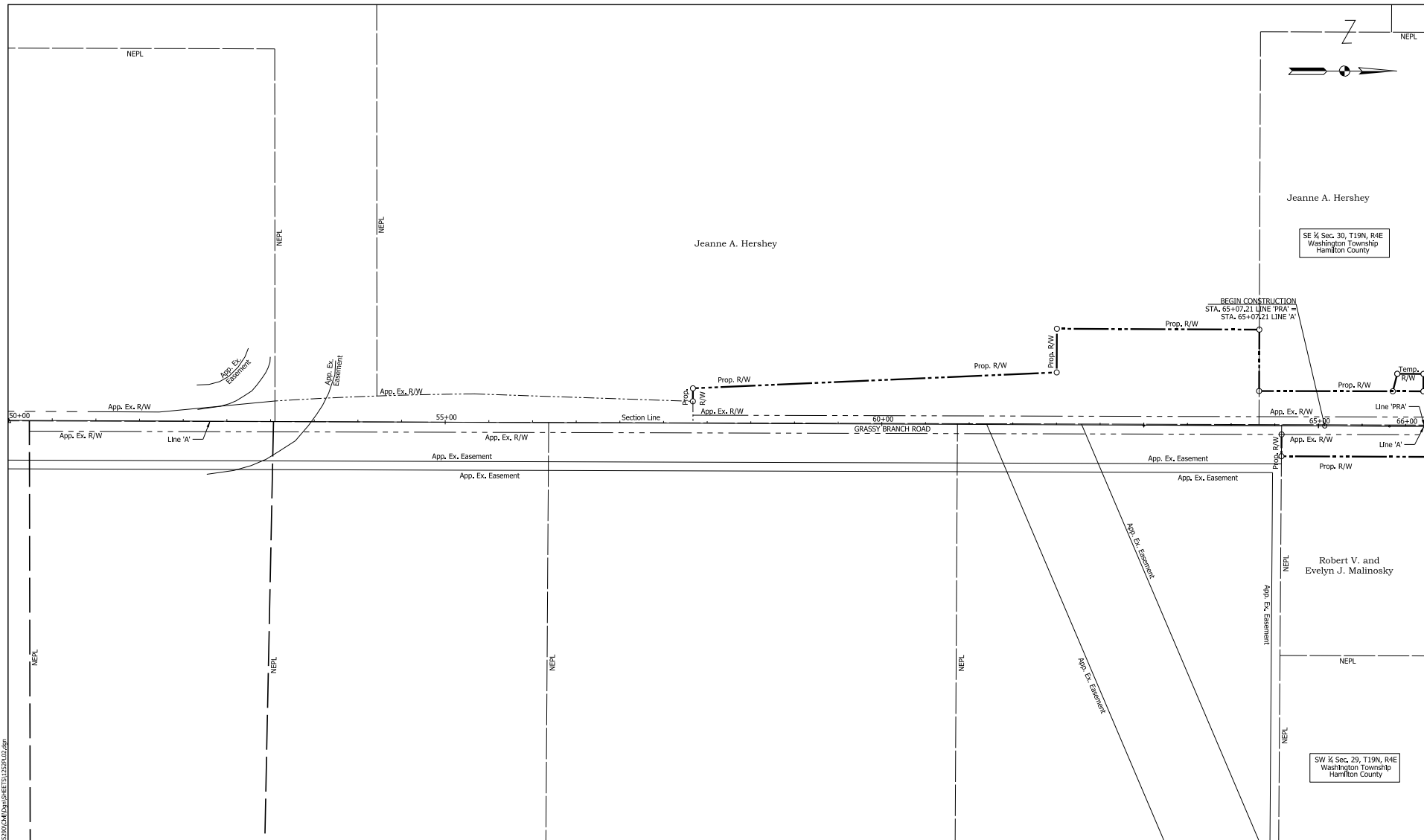
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DESIGNED: PH	1/2020	DRAWN: DPH
CHECKED: RAC	1/2020	CHECKED: PH
	1/2020	

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE 1" = 4' = 1'-0"	ROAD FILE
	DESIGNATION
	1700731
SURVEY BOOK	SHEETS
ELECTRONIC	5 of 68
CONTRACT	PROJECT
R-40286	1700731

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CONSTRUCTION

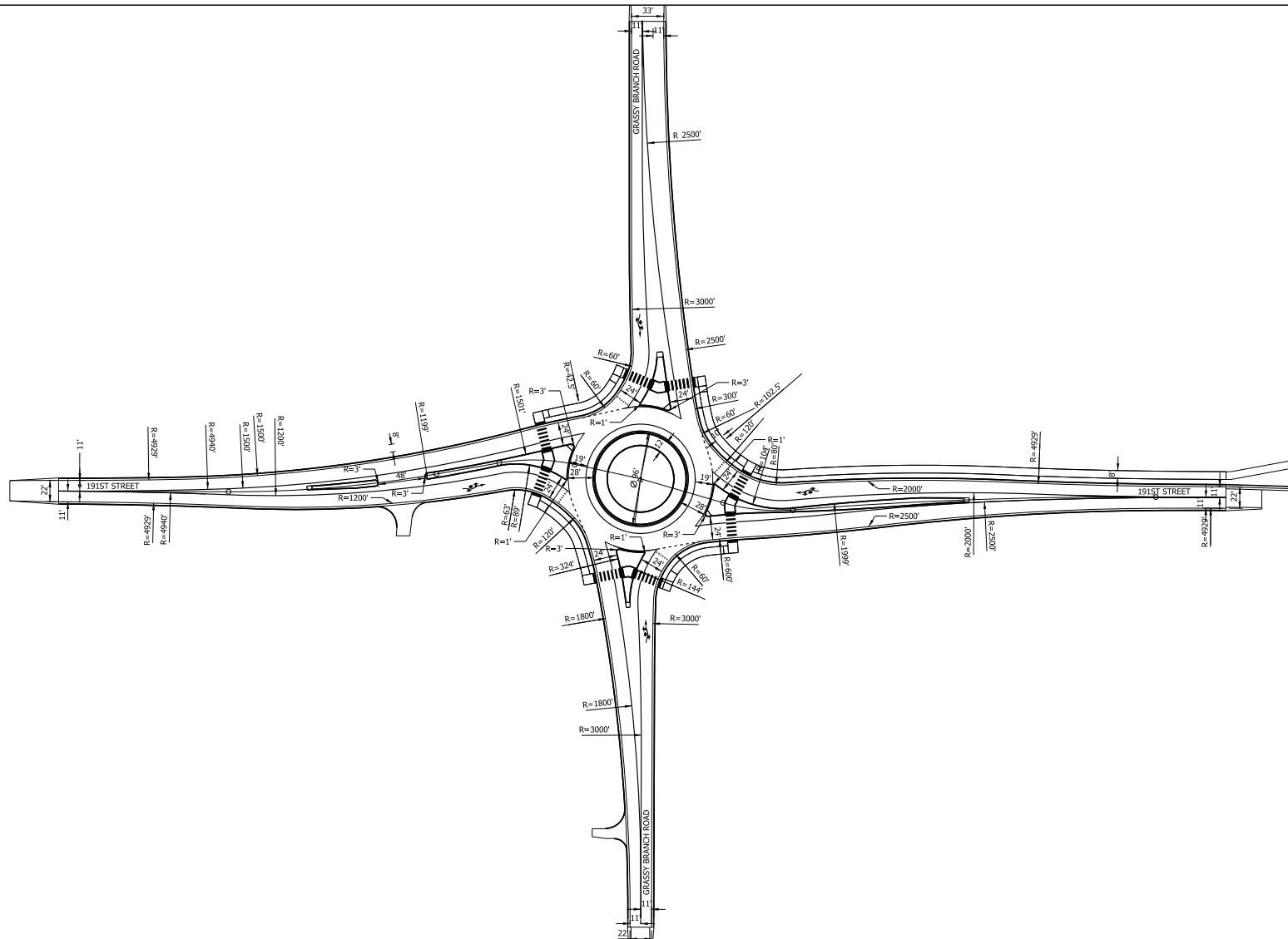
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1/2020		CHECKED: _____ RAC		1/2020	
1/2020		CHECKED: _____ PH		1/2020	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAT NO. 2

SCALE	ROAD FILE
1" = 50'	N/A
DESIGNATION	1700731
SURVEY BOOK	SHEETS
ELECTRONIC	8 of 68
CONTRACT	PROJECT
R-40286	1700731





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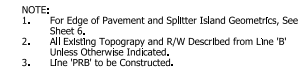


NOT FOR
 CONSTRUCTION
 DLZ INDIANA, LLC

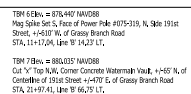
RECOMMENDED FOR APPROVAL		DESIGN ENGINEER		DATE
DESIGNED: _____	PH	1/2020	DRAWN: _____	DPH 1/2020
CHECKED: _____	RAC	1/2020	CHECKED: _____	PH 1/2020

INDIANA DEPARTMENT OF TRANSPORTATION	
ROUNDABOUT LAYOUT PLAN 191ST STREET AND GRASSY BRANCH RD.	

SCALE 1" = 50'	ROAD FILE N/A
	DESIGNATION 1700731
SURVEY BOOK ELECTRONIC	SHEETS 11 of 68
CONTRACT R-40286	PROJECT 1700731



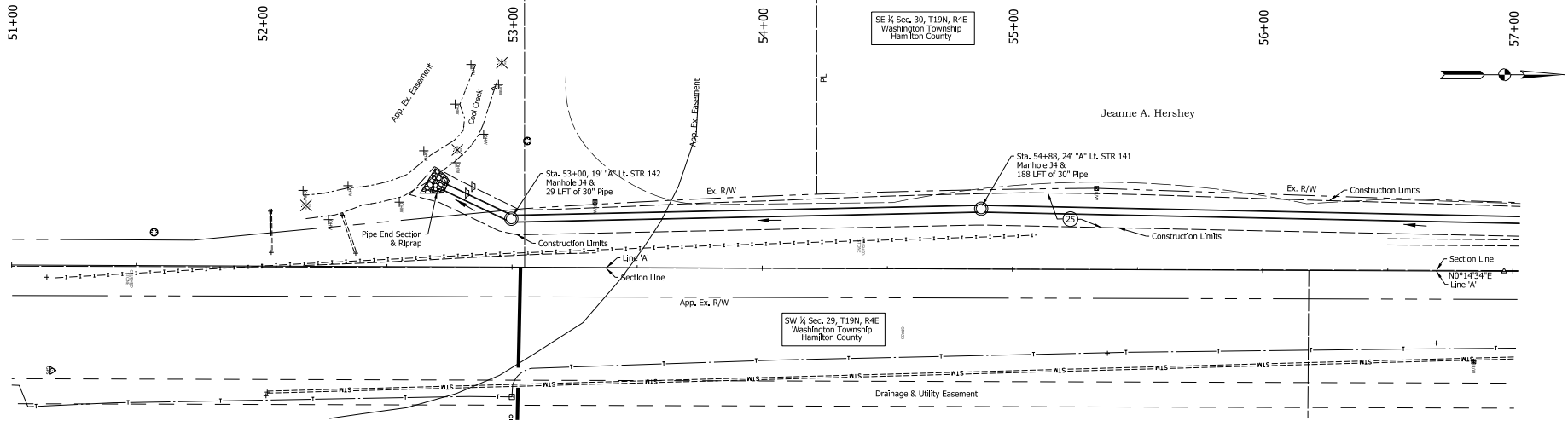
11	Sawcut
14	Curb Concrete
15	Concrete Curb & Gutter
25	Seed Mixture, U
26	Sodding, Nursery
47	Center Curb, Type D
81	Relocate (By Others)
F	6" PC/P, on 6" Compacted Aggregate, No. 53
F61	360 lbs/SYD HMA For Sidewalk Consisting of: 140 lbs/SYD QA-HMA, Surface, Type B, on 140 lbs/SYD HMA, Intermediate, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment, Type II
K	Mainline Pavement Section 220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm, on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm, on 3" Compacted Aggregate, No. 53 Subgrade Treatment, Type ID
R	Mill and Overlay 220#/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on Asphalt Milling, 2"
T	Curb Transition
W	880 lbs/SYD Widening with HMA, Type B Consisting of: 220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm, on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm, on 3" Compacted Aggregate, No. 53, on Subgrade Treatment, Type ID



INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'PRB'

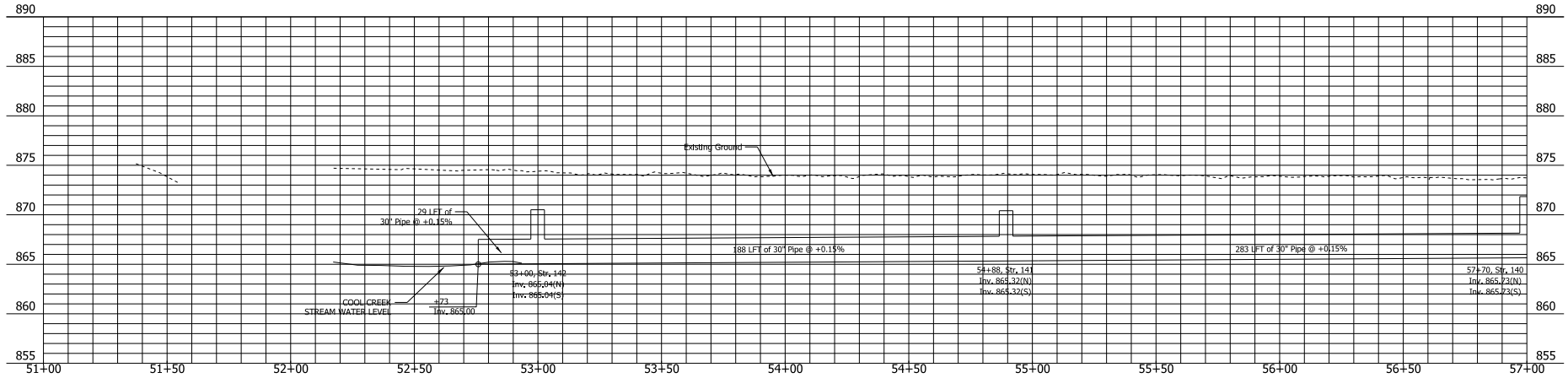
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	VERTICAL SCALE	DESIGNATION	
	1" = 5'	1700731	
	SURVEY BOOK	SHEETS	
	ELECTRONIC	15	of 68
	CONTRACT	PROJECT	
	9-467986	1700731	



LEGEND:

- (25) Seed Mixture, U

- NOTE:**
1. All Existing Topography and R/W Described from Line 'A' Unless Otherwise Indicated.
 2. Line 'PRA' to be Constructed.



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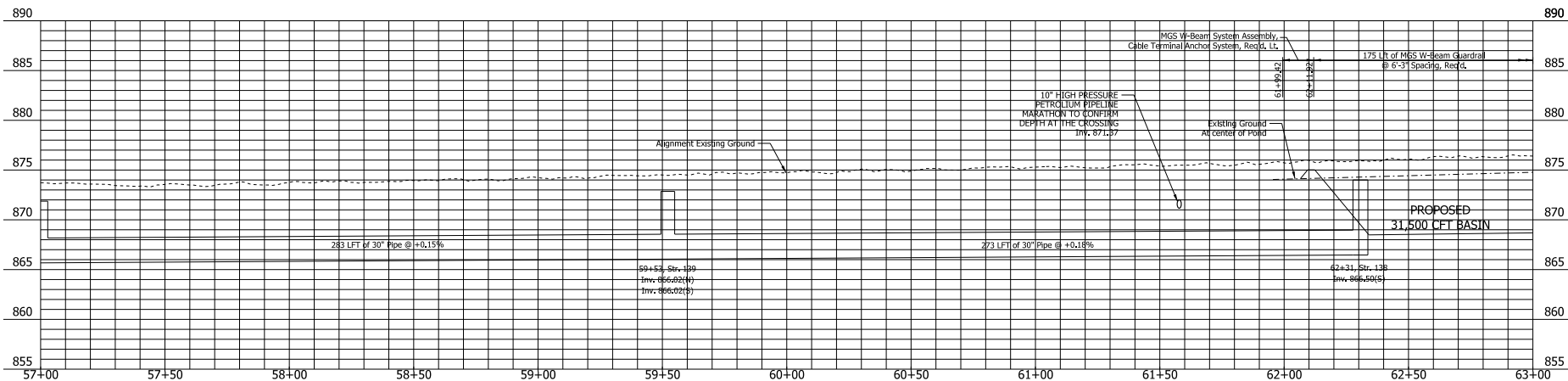
NOT FOR CONSTRUCTION

DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL _____		
DESIGN ENGINEER _____		DATE _____
DESIGNER: PH 1/2020	DRAWN: dph 1/2020	
CHECKED: RAC 1/2020	CHECKED: PH 1/2020	

INDIANA DEPARTMENT OF TRANSPORTATION	
PLAN LINE 'A'	

HORIZONTAL SCALE	ROAD FILE
1" = 30'	N/A
VERTICAL SCALE	DESIGNATION
1" = 5'	1700731
SURVEY BOOK	SHEETS
ELECTRONIC	16 of 68
CONTRACT	PROJECT
R-40286	1700731



HORIZONTAL SCALE	ROAD FILE		
1" = 20'	N/A		
VERTICAL SCALE	DESIGNATION		
1"=5'	1700731		
SURVEY BOOK	SHEETS		
ELECTRONIC	17	of	68
CONTRACT	PROJECT		
R-40286	1700731		

NOT FOR CONSTRUCTION
DLZ INDIANA, LLC

200	N=1752825.695 E=204247.1026	201	N=1753454.058 E=204187.9251	202	N=1754147.334 E=204181.208
<p>Diagram of station 200: A plan view showing a 'MAG SPIKE' (a vertical line with a circle at the top) and a 'Grassy Br.' (a shaded area). A 'Capped Rebar' is shown as a circle with a cross. A 'd. Top Water' line is indicated. The station is labeled 'STA. 51+16.40 LINE 'A' 42.12' RT.'.</p>	<p>Diagram of station 201: A plan view showing a 'Grassy Br.' (a shaded area) and a 'CAPPED REBAR' (a circle with a cross). A 'd. Top Water' line is indicated. The station is labeled 'STA. 57+44.51 LINE 'A' 19.72' LT.'.</p>	<p>Diagram of station 202: A plan view showing a 'Grassy Br.' (a shaded area) and a 'CAPPED REBAR' (a circle with a cross). A 'd. Top Water' line is indicated. The station is labeled 'STA. 64+37.79 LINE 'A' 19.38' LT.'.</p>			
STA. 51+16.40 LINE 'A' 42.12' RT.	STA. 57+44.51 LINE 'A' 19.72' LT.	STA. 64+37.79 LINE 'A' 19.38' LT.			



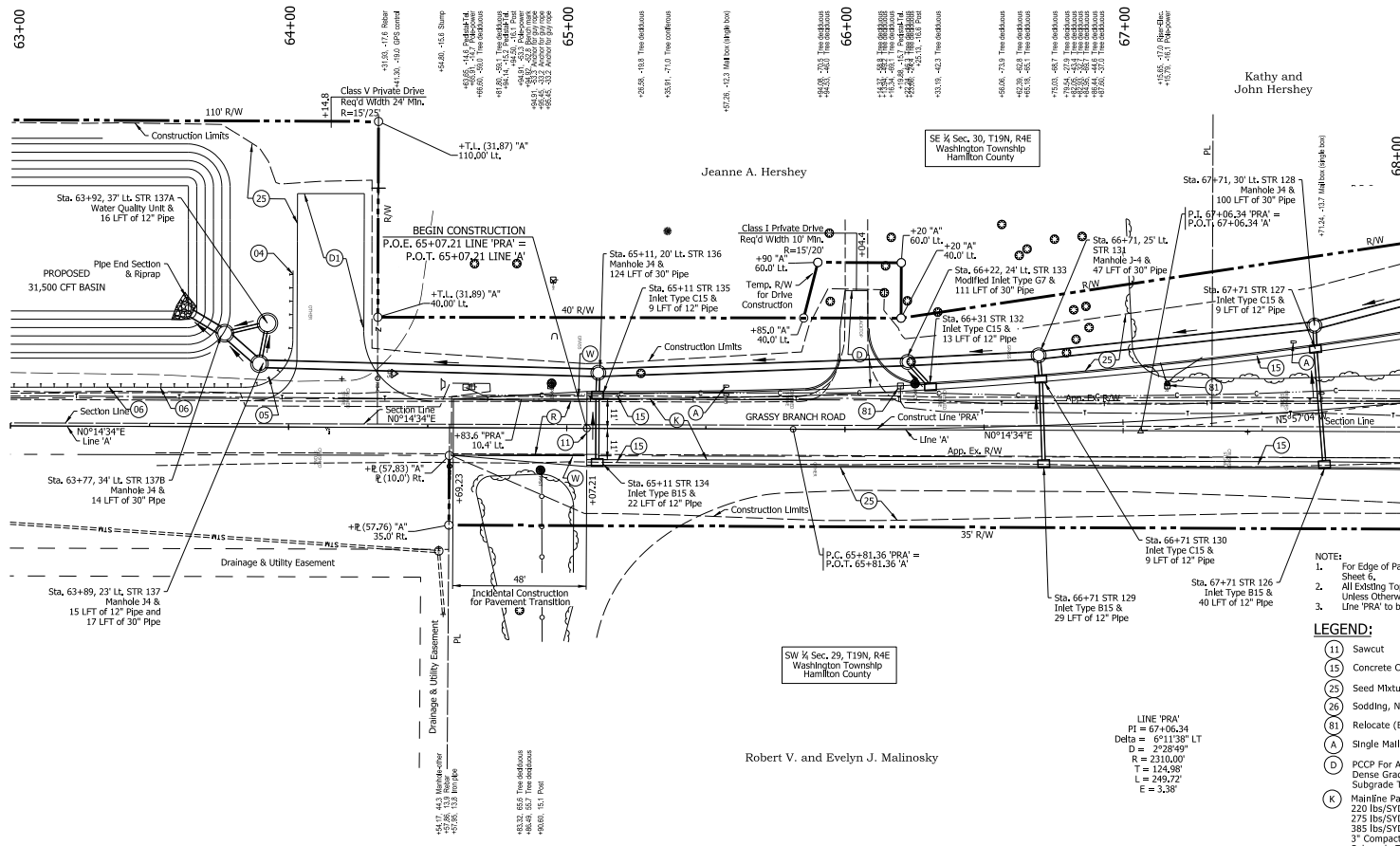
NOT FOR CONSTRUCTION
DLZ INDIANA, LLC

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
DESIGNER: PH 1/2020	DRAWN: GPH 1/2020	
CHECKED: RAC 1/2020	CHECKED: PH 1/2020	

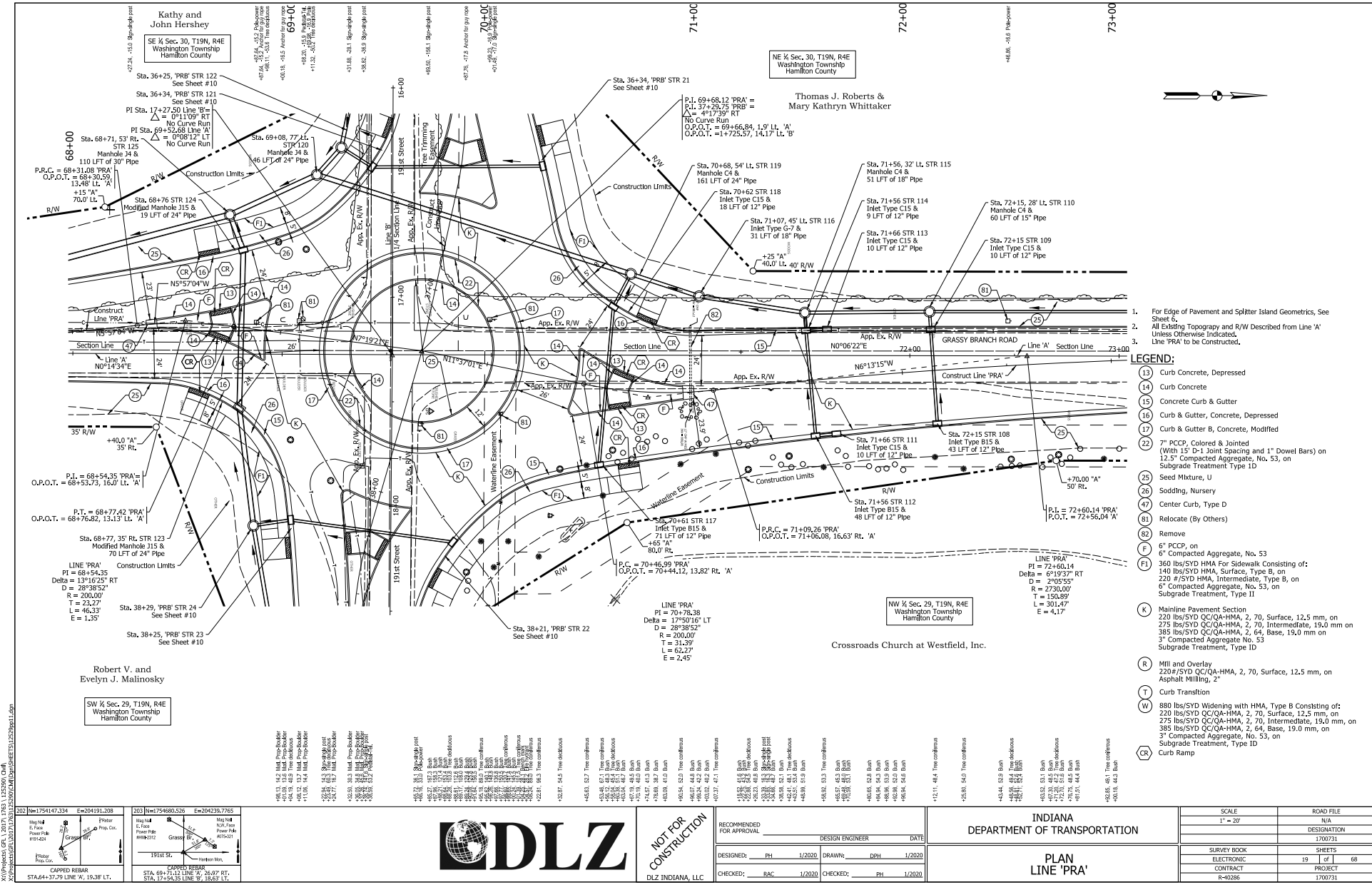
INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'PRA'

SCALE	ROAD FILE
1" = 20'	DESIGNATION
	1700731
SURVEY BOOK	SHEETS
ELECTRONIC	18 of 68
CONTRACT	PROJECT
R-40286	1700731

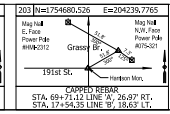


- NOTES:
- For Edge of Pavement and Splitter Island Geometrics, See Sheet 6.
 - All Existing Topography and R/W Described from Line 'A' Unless Otherwise Indicated.
 - Line 'PRA' to be Constructed.
- LEGEND:
- (1) Sawcut
 - (15) Concrete Curb & Gutter
 - (25) Seed Mixture, U
 - (26) Sodding, Nursery
 - (81) Relocate (By Others)
 - (A) Single Mailbox Assembly
 - (D) PCPP For Approaches, 6', on Dense Graded Subbase, on Subgrade Treatment Type ID
 - (K) Mainline Pavement Section
220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm, on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on 3" Compacted Aggregate, No. 53, on Subgrade Treatment, Type ID
 - (M) HMA for Approaches:
165# SYD HMA, Surface, Type B, on 275# SYD HMA, Intermediate, Type B, on 880# SYD HMA, Base, Type B, on Subgrade Treatment Type III
 - (R) Mill and Overlay
220# SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on Asphalt Milling, 2"
 - (T) Curb Transition
 - (W) 880 lbs/SYD Widening with HMA, Type B Consisting of:
220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm, on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm, on 3" Compacted Aggregate, No. 53, on Subgrade Treatment, Type ID
- (04) Guardrail, MGS, W-Beam, Cable Terminal Anchor
(05) Guardrail, MGS W-Beam, Shop Curved, 6'-3" Spacing
(06) Guardrail, W-Beam, MGS 6'-3" Spacing
(01) 6" Compacted Aggregate No. 73, on Subgrade Treatment Type ID



1. For Edge of Pavement and Splitter Island Geometrics, See Sheet 6.
2. All Existing Topography and R/W Described from Line 'A' Unless Otherwise Indicated.
3. Line 'PRA' to be Constructed.
- LEGEND:**
- (13) Curb Concrete, Depressed
 - (14) Curb Concrete
 - (15) Concrete Curb & Gutter
 - (16) Curb & Gutter, Concrete, Depressed
 - (17) Curb & Gutter B, Concrete, Modified
 - (22) 7" PCP, Colored & Jointed (With 15' D-1 Joint Spacing and 1" Dowel Bars) on 12.5" Compacted Aggregate, No. 53, on Subgrade Treatment Type ID
 - (25) Seed Mixture, U
 - (26) Sodding, Nursery
 - (47) Center Curb, Type D
 - (81) Relocate (By Others)
 - (F) Remove
 - (F) 6" PCP, on 6" Compacted Aggregate, No. 53
 - (F1) 360 lbs/SYD HMA For Sidewalk Consisting of: 140 lbs/SYD HMA, Surface, Type B, on 220 #/SYD HMA, Intermediate, Type B, on 6" Compacted Aggregate, No. 53, on Subgrade Treatment, Type II
 - (K) Mainline Pavement Section 220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm on 3" Compacted Aggregate No. 53 Subgrade Treatment, Type ID
 - (R) MHI and Overlay 220#/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on Asphalt Milling, 2"
 - (T) Curb Transition
 - (W) 880 lbs/SYD Widening with HMA, Type B Consisting of: 220 lbs/SYD QC/QA-HMA, 2, 70, Surface, 12.5 mm, on 275 lbs/SYD QC/QA-HMA, 2, 70, Intermediate, 19.0 mm, on 385 lbs/SYD QC/QA-HMA, 2, 64, Base, 19.0 mm, on 3" Compacted Aggregate, No. 53, on Subgrade Treatment, Type ID
 - (CR) Curb Ramp

202 N=1754147.334 E=204191.208
203 N=1754680.526 E=204238.7765



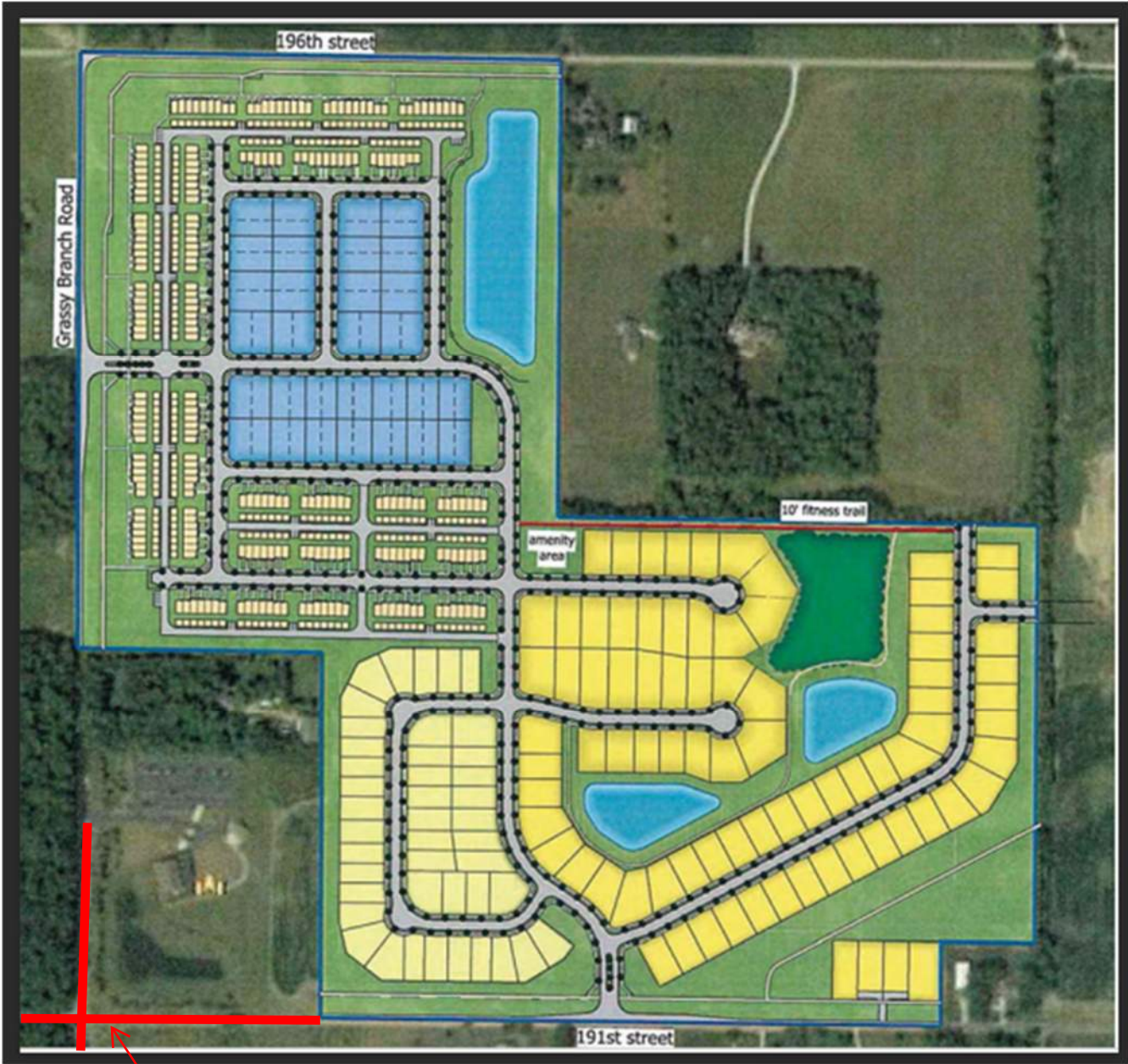
RECOMMENDED FOR APPROVAL		DESIGN ENGINEER		DATE	
DESIGNED:	PH	1/2020	DPH	1/2020	
CHECKED:	RAC	1/2020	PH	1/2020	

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN
LINE 'PRA'


SCALE		ROAD FILE	
1" = 20'		DESIGNATION	
		1700731	
SURVEY BOOK		SHEETS	
ELECTRONIC		19 of 68	
CONTRACT		PROJECT	
R-40286		1700731	

Lindley Run Graphic



<https://www.westfield.in.gov/egov/apps/document/center.egov?view=detail&id=6416>

Approximate
Project Location

	WATERS OF THE U.S. REPORT 191st Street/Grassy Branch Road Intersection Improvements Des. No.: 1700731 Hamilton County, Indiana	Development Graphic
		Appendix B-27

APPENDIX C

Early Coordination



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix C

May 7, 2018

State Conservationist
Natural Resource Conservation Service
6013 Lakeside Blvd.
Indianapolis, IN 46278-2933

Re: 191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Sample Early Coordination Request

Note: Project location graphics and project area photographs have been removed from this appendix. Similar graphics are presented in Appendix B of this Categorical Exclusion document.

Dear Interested Party,

The Federal Highway Administration (FHWA) and Hamilton County, Indiana intends to proceed with a project involving the reconstruction of the 191st Street/Grassy Branch Road intersection. DLZ Indiana, LLC is the consultant contracted by Hamilton County for the project. Project development activities will require preparation of an environmental study to determine potential project effects upon community, economic and ecological resources.

We are requesting comments per your areas of expertise regarding any possible environmental effects associated with the project. **Please use the above designation number and description in your reply.** We will incorporate your comments into the required study of the project's environmental impacts.

Should a response not be received **within thirty (30) calendar days** from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary; a reasonable amount may be granted upon request.

If you have any questions regarding this matter, please feel free to contact the undersigned by telephone: (574)-236-4400, or email: dstevens@dlz.com. Thank you for your assistance and prompt response to this coordination request.

Very truly yours,



Daniel J. Stevens
Environmental Scientist

cc: INDOT- Office of Environmental Services
DLZ file

The following agencies received Early Coordination letters:

State Conservationist
Natural Resource Conservation Service
6013 Lakeside Blvd.
Indianapolis, IN 46278-2933

Indiana Geological Survey
Email Early Coordination

Manager, Aviation Section, INDOT
Email Early Coordination

Regional Environmental Coordinator
Midwest Regional office
National Park Service
601 Riverfront Drive
Omaha, NE 68102

Indiana Department of Environmental
Management
Automatic Website Early Coordination

Environmental Coordinator
Indiana Department of Natural Resources
Email Early Coordination

Field Environmental Officer
US Department of Housing and Urban
Development
Email Early Coordination

Manager, Public Hearings
INDOT
Email Early Coordination

Environmental Scoping Manager
INDOT – Greenfield District
Email Early Coordination

Hamilton County Sheriff
Email Early Coordination

Louisville District, Corps of Engineers
Mr. Greg McKay
ATTN: CELRL-OPF-N
Louisville District, USACE
P.O. Box 59

Indianapolis Metropolitan Planning
Organization
200 East Washington Street
City/County Bldg. Suite 1922
Indianapolis, IN 46204

Hamilton County Commissioners
Email Early Coordination

Westfield-Washington Schools
18160 Market Ct
Westfield, IN 46074

City of Westfield Fire Department
17535 Dartown Road
Westfield, IN 46074
Deputy Chief Robert Gaylor

City of Westfield Police Department
17535 Dartown Road
Westfield, IN 46074
Chief Joel D. Rush

Hamilton County Surveyor
1 Hamilton County Square
Suite 188
Noblesville, IN 46060

Mayor of Westfield
Mr. Andy Cook
2728 E 171st St
Westfield, IN 46074

USFWS Bloomington
Email Early Coordination

Daniel Stevens

From: Daniel Stevens
Sent: Monday, May 07, 2018 2:47 PM
To: 'igsenvir@indiana.edu'; 'jkinder2@indot.in.gov'; 'environmentalreview@dnr.in.gov'; 'RCLARK@indot.IN.gov'; 'MWright@indot.in.gov'; 'steve.vahl@hud.gov'; 'kcarmanygeorge2@indot.in.gov'; mark.bowen@hamiltoncounty.in.gov; dan.stevens@hamiltoncounty.in.gov; robin_mcwilliams@fws.gov
Cc: Bales, Ronald; Jason Stone
Subject: Early Coordination Request - 191st Street/Grassy Branch Road Intersection Improvements - Des. No.: 1700731 - Hamilton County, Indiana
Attachments: Project Information - 1700731.pdf

Re: 191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Sample Early Coordination E-mail

Dear Interested Party,

The Federal Highway Administration (FHWA) and Hamilton County, Indiana intends to proceed with a project involving the reconstruction of the 191st Street/Grassy Branch Road intersection. DLZ Indiana, LLC is the consultant contracted by Hamilton County for the project. Project development activities will require preparation of an environmental study to determine potential project effects upon community, economic and ecological resources.

We are requesting comments per your areas of expertise regarding any possible environmental effects associated with the project. **Please use the above designation number and description in your reply.** We will incorporate your comments into the required study of the project's environmental impacts.

Should a response not be received **within thirty (30) calendar days** from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary; a reasonable amount may be granted upon request.

If you have any questions regarding this matter, please feel free to contact the undersigned by telephone: (574)-236-4400, or email: dstevens@dlz.com. Thank you for your assistance and prompt response to this coordination request.

Best Regards,

Daniel Stevens | Environmental Scientist

574-236-4400 x614 (office) | 574-236-4471 (fax) | 574-514-8266 (cell)
dstevens@dlz.com | www.dlz.com



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Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 North Senate Avenue - Indianapolis, IN 46204
(800) 451-6027 - (317) 232-8603 - www.idem.IN.gov

Hamilton County Highway Department
David Lucas
1700 S. 10th Street
Noblesville, IN 46060

DLZ Indiana, LLC
Daniel J. Stevens
2211 E. Jefferson Blvd.
South Bend, IN 46615

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The proposed project (Des. No.: 1700731) involves the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout in Hamilton County, Indiana. The project includes approach improvements, new sidewalk/multiuse path, new lighting, and drainage improvements. It is within Washington Township, in Sections 29 and 30, Township 19 North, and Range 4 East. The roadway improvements extend along both 191st Street and Grassy Branch Road approaches approximately 500 feet in each direction from the intersection. Drainage improvements (storm sewer) will extend south of the intersection along Grassy Branch Road approximately 1,700 feet to Cool Creek.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: <http://www.in.gov/idem/5283.htm>
(<http://www.in.gov/idem/5283.htm>).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (<http://www.lrl.usace.army.mil/orf/default.asp>) (<http://www.lrl.usace.army.mil/orf/default.asp>) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciusko, and Wells counties; smaller portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at <http://www.in.gov/idem/4396.htm> (<http://www.in.gov/idem/4396.htm>). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>).
3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana . A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the

discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.

4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>) for the appropriate staff contact to further discuss your project.
5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the follow statutes:
 - IC 14-26-2 Lakes Preservation Act 312 IAC 11
 - IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
 - IC 14-28-1 Flood Control Act 310 IAC 6-1
 - IC 14-29-1 Navigable Waterways Act 312 IAC 6
 - IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
 - IC 14-29-4 Construction of Channels Act No related code

For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: <http://www.in.gov/dnr/water/9451.htm> (<http://www.in.gov/dnr/water/9451.htm>) . Contact the DNR Division of Water at 317-232-4160 for further information.

The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
 - <http://www.in.gov/idem/4902.htm> (<http://www.in.gov/idem/4902.htm>)

To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (<http://www.in.gov/idem/4917.htm#constreq> (<http://www.in.gov/idem/4917.htm#constreq>)), and as described in 327 IAC 15-5-6.5 (<http://www.in.gov/legislative/iac/T03270/A00150> [PDF] (<http://www.in.gov/legislative/iac/T03270/A00150.PDF>), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (<http://www.in.gov/isda/soil/contacts/map.html> (<http://www.in.gov/isda/soil/contacts/map.html>)).

Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent

(NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: <http://www.in.gov/idem/4900.htm> (<http://www.in.gov/idem/4900.htm>).

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.
8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.
9. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations.

Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (<http://www.in.gov/idem/4148.htm>)

(<http://www.in.gov/idem/4148.htm>)) under specific conditions. You also can seek an open burning variance from IDEM.

However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>).)

The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit:

http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf

(http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf.) It also is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

To learn more about radon, radon risks, and ways to reduce exposure visit:

<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>

(<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>), <http://www.in.gov/idem/4145.htm>

(<http://www.in.gov/idem/4145.htm>), or <http://www.epa.gov/radon/index.html>

(<http://www.epa.gov/radon/index.html>).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at <http://www.in.gov/icpr/webfile/formsdiv/44593.pdf> (<http://www.in.gov/icpr/webfile/formsdiv/44593.pdf>).

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of \$150 per project; projects below these amounts will be billed a fee of \$50 per project. All notification remitters will be billed on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit: <http://www.in.gov/idem/4983.htm> (<http://www.in.gov/idem/4983.htm>).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978, or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: <http://www.in.gov/isdh/19131.htm> (<http://www.in.gov/isdh/19131.htm>).
5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2, Asphalt Paving Rule (<http://www.ai.org/legislative/iac/T03260/A00080.PDF> (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>)).
6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by

the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf (<http://www.ai.org/legislative/iac/t03260/a00020.pdf>)). New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.

7. For more information on air permits visit: <http://www.in.gov/idem/4223.htm> (<http://www.in.gov/idem/4223.htm>), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD at adem.state.in.us.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/4998.htm> (<http://www.in.gov/idem/4998.htm>).
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: <http://www.in.gov/idem/4999.htm> (<http://www.in.gov/idem/4999.htm>).

FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that it is the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at <http://www.in.gov/idem/5284.htm> (<http://www.in.gov/idem/5284.htm>), is used.

Signature(s) of the Applicant

I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

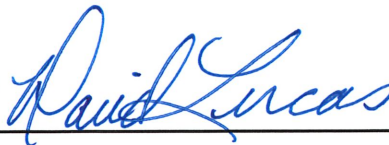
Project Description

The proposed project (Des. No.: 1700731) involves the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout in Hamilton County, Indiana. The project includes approach improvements, new sidewalk/multiuse path, new lighting, and drainage improvements. It is within Washington Township, in Sections 29 and 30, Township 19 North, and Range 4 East. The roadway improvements extend along both 191st Street and Grassy Branch Road approaches approximately 500 feet in each direction from the intersection. Drainage improvements (storm sewer) will extend south of the intersection along Grassy Branch Road approximately 1,700 feet to Cool Creek.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: 10/17/19

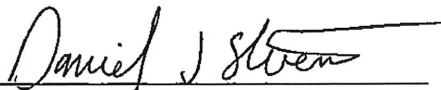
Signature of the INDOT
Project Engineer or Other Responsible Agent



David Lucas
Hamilton County Highway Dept. Project Coordinator, ERC

Date: 10-16-19

Signature of the
For Hire Consultant



Daniel J. Stevens

Daniel Stevens

From: Greg R. Hoyes <Greg.Hoyes@hamiltoncounty.in.gov>
Sent: Thursday, May 10, 2018 4:27 PM
To: Daniel Stevens
Cc: David E. Lucas
Subject: DES No 1700731

Daniel

We have been involved in the drainage for this project with Dave Lucas for months, so we have no additional comments for drainage. From the surveyor side of our office, there is a section corner (Harrison) at the intersection and that will need to be perpetuated with the road project. A link to the section corner tie sheet is below. If you have any questions, please let me know.

<http://www2.hamiltoncounty.in.gov/upload/images/survey/TieSheets/19043006.pdf>

Greg Hoyes, AC, CFM, CPESC
Plan Reviewer
Hamilton County Surveyor's Office

Organization and Project Information

Project ID:
Des. ID: 1700731
Project Title: 191st Street and Grassy Branch Road Roundabout
Name of Organization: DLZ Indiana, LLC
Requested by: Daniel Stevens

Environmental Assessment Report

1. Geological Hazards:
 - Moderate liquefaction potential
 - Floodway
2. Mineral Resources:
 - Bedrock Resource: High Potential
 - Sand and Gravel Resource: Low Potential
3. Active or abandoned mineral resources extraction sites:
 - Petroleum Exploration Wells

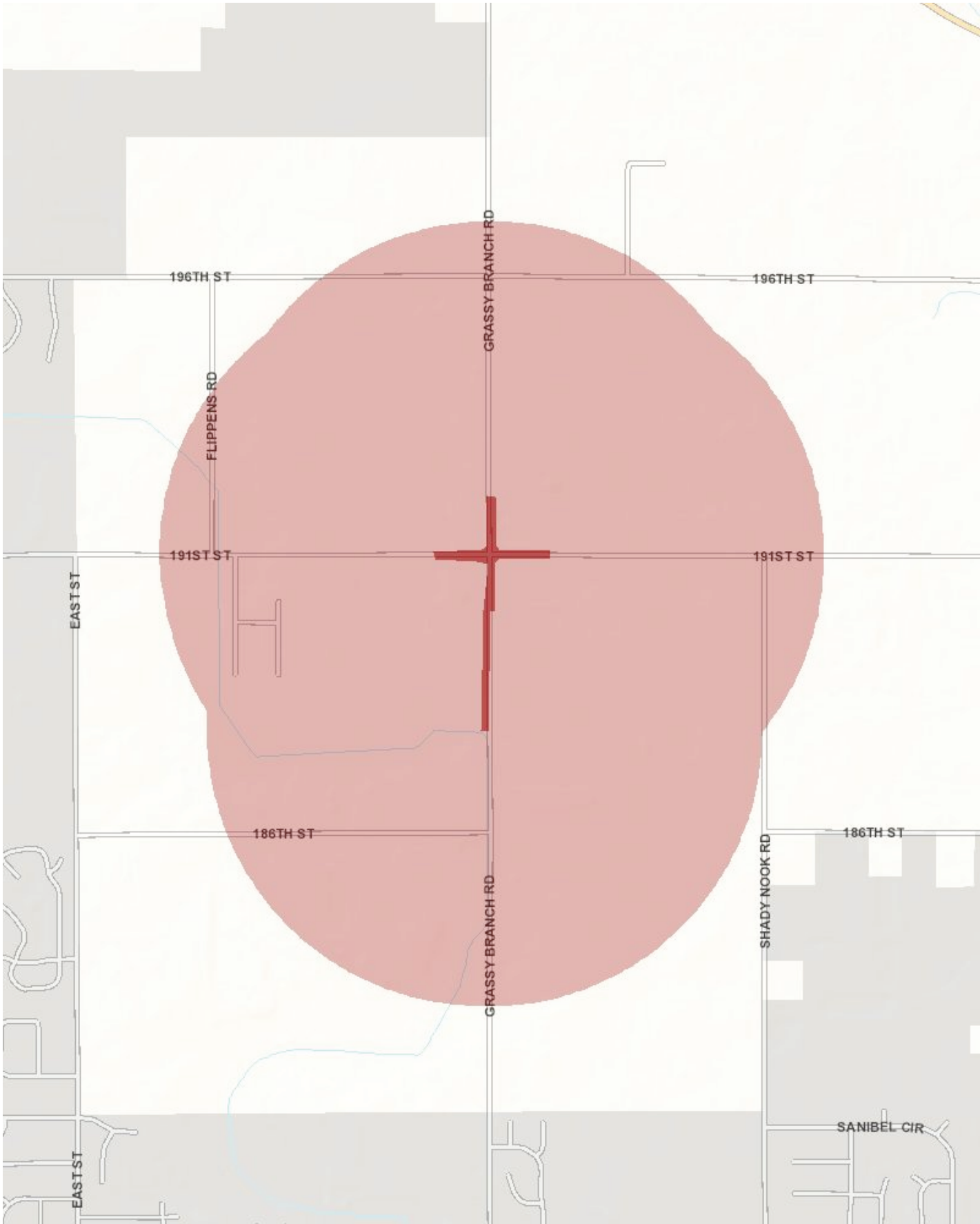
*All map layers from Indiana Map (maps.indiana.edu)

DISCLAIMER:

This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use. No attempt has been made in either the design or production of these data and document to define the limits or jurisdiction of any federal, state, or local government. The data used to assemble this document are intended for use only at the published scale of the source data or smaller (see the metadata links below) and are for reference purposes only. They are not to be construed as a legal document or survey instrument. A detailed on-the-ground survey and historical analysis of a single site may differ from these data and this document.

This information was furnished by Indiana Geological Survey
Address: 420 N. Walnut St., Bloomington, IN 47404
Email: IGSEnvir@indiana.edu
Phone: 812 855-7428

Date: May 02, 2019



Metadata:

- https://maps.indiana.edu/metadata/Geology/Petroleum_Wells.html
- https://maps.indiana.edu/metadata/Geology/Seismic_Earthquake_Liquefaction_Potential.html
- https://maps.indiana.edu/metadata/Geology/Industrial_Minerals_Sand_Gravel_Resources.html
- https://maps.indiana.edu/metadata/Hydrology/Floodplains_FIRM.html
- https://maps.indiana.edu/metadata/Geology/Bedrock_Geology.html



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N955
Indianapolis, Indiana 46204

PHONE: (317) 232-1477
FAX: (317) 232-1499

Eric Holcomb, Governor
Joe McGuinness, Commissioner

May 18, 2018

Mr. Daniel Stevens, Environmental Scientist
DLZ
2211 East Jefferson Blvd
South Bend, IN 46615

Subject: Early Coordination Review (Des. No. 1700731)

Dear Mr. Stevens,

In response to your request on May 7, 2018 for early coordination review of the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout in Hamilton County, Indiana; the Indiana Department of Transportation, Office of Aviation has reviewed the information and provides the following:

Are there any existing or proposed public-use airports within 5 nautical miles of the project limits (IC 8-21-10-6)?

The Westfield Airport is located approximately 2.4 nautical miles southeast of the proposed project site.

Will an Indiana Tall Structure permit (IC 8-21-10-3-a) and/or Noise Sensitive (IC 8-21-10-3-b) permit be required?

Based upon the provided information, an Indiana Tall Structure permit would not be required unless the project involves the construction of a temporary (e.g., crane) or permanent structure that penetrates a 100:1 slope from the nearest point of the Westfield Airport runway.

For any questions related to Indiana Tall Structure and/or Noise Sensitive permitting, please contact James Kinder at (317) 232-1485 or jkinder2@indot.in.gov.

Sincerely,

Adam French, MPA
Chief Airport Inspector, Office of Aviation
Indiana Department of Transportation

May 21, 2018

Daniel J. Stevens
Environmental Scientist
DLZ
2211 East Jefferson Boulevard
South Bend, Indiana 46615

DLZ
MAY 24 2018
RECEIVED

Dear Mr. Stevens:

The proposed project to improve the intersection at 191st Street and Grassy Branch Road in Hamilton County, Indiana (Des No. 1700731), as stated in your letter received May 7, 2018, will not be able to be determined at this time due to a lack of site specific information. Please resubmit when specific/potential impacts are determined

If you need additional information, please contact Rick Neilson at 317-295-5875.

Sincerely,



GERALD L. ROACH
Acting State Conservationist



June 4, 2019

Daniel Stevens
DLZ
2211 East Jefferson Boulevard
South Bend, Indiana 46615

Dear Mr. Stevens:

The revised project to make intersection improvements at 191st Street and Grassy Branch Road in Hamilton County, Indiana, (Des No 1700731) as referred in your letter received April 30, 2019, will cause a conversion of prime farmland.

The attached packet of information is for your use competing Parts VI and VII of the AD-1006. After completion, the federal funding agency needs to forward one copy to NRCS for our records.

If you need additional information, please contact Daniel Phillips at 317-295-5871.

Sincerely,

JERRY RAYNOR Digitally signed by JERRY
RAYNOR
Date: 2019.06.09 20:16:27 -04'00'

JERRY RAYNOR
State Conservationist

Enclosures



FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request			
Name of Project		Federal Agency Involved			
Proposed Land Use		County and State			
PART II (To be completed by NRCS)		Date Request Received By NRCS		Person Completing Form:	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? (If no, the FPPA does not apply - do not complete additional parts of this form)		YES <input type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %		Amount of Farmland As Defined in FPPA Acres: %		
Name of Land Evaluation System Used	Name of State or Local Site Assessment System		Date Land Evaluation Returned by NRCS		
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site					
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide Important or Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)					
PART VI (To be completed by Federal Agency) Site Assessment Criteria (Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)		Maximum Points	Site A	Site B	Site C
1. Area In Non-urban Use		(15)			
2. Perimeter In Non-urban Use		(10)			
3. Percent Of Site Being Farmed		(20)			
4. Protection Provided By State and Local Government		(20)			
5. Distance From Urban Built-up Area		(15)			
6. Distance To Urban Support Services		(15)			
7. Size Of Present Farm Unit Compared To Average		(10)			
8. Creation Of Non-farmable Farmland		(10)			
9. Availability Of Farm Support Services		(5)			
10. On-Farm Investments		(20)			
11. Effects Of Conversion On Farm Support Services		(10)			
12. Compatibility With Existing Agricultural Use		(10)			
TOTAL SITE ASSESSMENT POINTS		160			
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100			
Total Site Assessment (From Part VI above or local site assessment)		160			
TOTAL POINTS (Total of above 2 lines)		260			
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>			
Reason For Selection:					
Name of Federal agency representative completing this form:					Date:

(See Instructions on reverse side)

Form AD-1006 (03-02)

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-20543

Request Received: May 7, 2018

Requestor: DLZ Indiana, LLC
Daniel J Stevens
2211 East Jefferson Boulevard
South Bend, IN 46615-2607

Project: 191st Street and Grassy Branch Road intersection roundabout construction with a new stormwater outfall to Cool Creek, Westfield, Des #1700731

County/Site info: Hamilton

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: This proposal will require the formal approval for construction in a floodway under the Flood Control Act, IC 14-28-1, unless it qualifies for a general license under Administrative Rule 312 IAC 10-5 that applies to outfall structures (see enclosure). Please include a copy of this letter with the permit application if the project does not meet the general license criteria.

Natural Heritage Database: The Natural Heritage Program's data have been checked. To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Lighting:

The information submitted mentions the installation of new lighting without going into further detail. Most transportation corridor designers and municipalities are trending toward LED lighting. Certain types of LED lighting can have negative impacts on both human and wildlife health and safety. The Division of Fish and Wildlife strongly encourages visiting the International Dark-Sky Association's website to learn more about the potential negative impacts of improperly selected LED lighting systems, if required: <http://darksky.org/lighting/led-practical-guide/>. Also, see https://www.washingtonpost.com/national/health-science/some-cities-are-taking-another-look-at-led-lighting-after-ama-warning/2016/09/21/98779568-7c3d-11e6-bd86-b7bbd53d2b5d_story.html.

2) Drainage Improvements:

It appears that the proposed drainage improvements have incorporated storage techniques to limit the amount of stormwater routed to Cool Creek during peak events. The Division of Fish and Wildlife encourages looking into additional techniques to limit the impact of impervious pavement and stormwater management. In general, the Division of Fish and Wildlife supports the purpose and need for the proposed project. The improvements are not likely to negatively impact significant fish, wildlife, or botanical resources. However, the Division of Fish and Wildlife recommends considering a more sustainable approach to stormwater management for transportation

Attachments: A - Outfall Exemption Criteria

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

corridor project.

The traditional model of stormwater management aims to drain urban runoff as quickly as possible with the help of channels and pipes, which increases peak flows and costs of stormwater management. This type of solution only transfers flood problems from one section of the basin to another section. A more sustainable approach aims to rebuild the natural water cycle by using storage techniques (retention basins, constructed wetlands, raingardens, etc.), recharging groundwater using infiltration techniques (infiltration basins or trenches, pervious pavement, etc.), and reusing runoff for irrigation elsewhere in the basin. The following link gives a good overview of traditional and sustainable stormwater management systems and their pros and cons: <http://www.sswm.info/content/stormwater-management>.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas that will not be mowed and maintained with a mixture of grasses, sedges, and wildflowers native to Central Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion; turf-type grasses (including low-endophyte, friendly endophyte, and endophyte free tall fescue but excluding all other varieties of tall fescue) may be used in regularly mowed areas only.
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 3 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
6. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
7. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
8. Do not use broken concrete as riprap.
9. Underlay the riprap with a bedding layer of well graded aggregate or a geotextile to prevent piping of soil underneath the riprap.
10. The sideslopes of the outlet section must be 2:1 or flatter.
11. Minimize the movement of resuspended bottom sediment from the immediate project area.
12. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
13. Seed and protect disturbed stream banks and slopes not protected by other methods that are 3:1 or steeper and areas where runoff is conveyed through a channel/swale with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.
14. Protect the area around and below any concentrated discharge points, down to the waterway's normal flow level, with an appropriate structural armament such as riprap.

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

Contact Staff:

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.



Date: June 6, 2018

Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

Daniel Stevens

From: McWilliams, Robin <robin_mcwilliams@fws.gov>
Sent: Wednesday, May 16, 2018 2:16 PM
To: Daniel Stevens
Subject: Re: [EXTERNAL] Early Coordination Request - 191st Street/Grassy Branch Road Intersection Improvements - Des. No.: 1700731 - Hamilton County, Indiana

Dear Mr. Stevens,

This responds to your recent letter, requesting our comments on the aforementioned project.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (16 U.S.C. 661 et. seq.) and are consistent with the intent of the National Environmental Policy Act of 1969, the Endangered Species Act of 1973, and the U. S. Fish and Wildlife Service's Mitigation Policy.

The project is within the range of the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) and should follow the new Indiana bat/northern long-eared bat programmatic consultation process, if applicable (*i.e.* a federal transportation nexus is established). We will review that information once it is received.

Based on a review of the information you provided, the U.S. Fish and Wildlife Service has no objections to the project as currently proposed. However, should new information arise pertaining to project plans or a revised species list be published, it will be necessary for the Federal agency to reinstitute consultation. Standard recommendations are provided below.

To protect water quality we recommend using pollutant-trapping technology such as storm drain inserts, etc. to reduce runoff of urban pollutants directly to the stream system.

We appreciate the opportunity to comment at this early stage of project planning. If project plans change such that fish and wildlife habitat may be affected, please recoordinate with our office as soon as possible. If you have any questions about our recommendations, please call (812) 334-4261 x. 207.

Sincerely,
Robin McWilliams Munson

Standard Recommendations:

1. Do not clear trees or understory vegetation outside the construction zone boundaries. **(This restriction is not related to the "tree clearing" restriction for potential Indiana Bat habitat.)**
2. Restrict below low-water work in streams to placement of culverts, piers, pilings and/or footings, shaping of the spill slopes around the bridge abutments, and placement of riprap.

Culverts should span the active stream channel, should be either embedded or a 3-sided or open-arch culvert, and be installed where practicable on an essentially flat slope. When an open-bottomed culvert or arch is used in a stream, which has a good natural bottom substrate, such as gravel, cobbles and boulders, the existing substrate should be left undisturbed beneath the culvert to provide natural habitat for the aquatic community.

3. Restrict channel work and vegetation clearing to the minimum necessary for installation of the stream crossing structure.
4. Minimize the extent of hard armor (riprap) in bank stabilization by using bioengineering techniques whenever possible. If rip rap is utilized for bank stabilization, extend it below low-water elevation to provide aquatic habitat.
5. Implement temporary erosion and sediment control methods within areas of disturbed soil. All disturbed soil areas upon project completion will be vegetated following INDOT's standard specifications.
6. Avoid all work within the inundated part of the stream channel (in perennial streams and larger intermittent streams) during the fish spawning season (April 1 through June 30), except for work within sealed structures such as caissons or cofferdams that were installed prior to the spawning season. No equipment shall be operated below Ordinary High Water Mark during this time unless the machinery is within the caissons or on the cofferdams.
7. Evaluate wildlife crossings under bridge/culverts projects in appropriate situations. Suitable crossings include flat areas below bridge abutments with suitable ground cover, high water shelves in culverts, amphibian tunnels and diversion fencing.

Robin McWilliams Munson

U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, Indiana 46403
812-334-4261 x. 207 Fax: 812-334-4273

Monday, Tuesday - 7:30a-3:00p
Wednesday, Thursday - telework 8:30a-3:00p

On Mon, May 7, 2018 at 2:46 PM, Daniel Stevens <dstevens@dlz.com> wrote:

Re: 191st Street/Grassy Branch Road

Intersection Improvements

Des. No.: 1700731

Hamilton County, Indiana

Dear Interested Party,

The Federal Highway Administration (FHWA) and Hamilton County, Indiana intends to proceed with a project involving the reconstruction of the 191st Street/Grassy Branch Road intersection. DLZ Indiana, LLC is the consultant contracted by Hamilton County for the project. Project development activities will require preparation of an environmental study to determine potential project effects upon community, economic and ecological resources.

We are requesting comments per your areas of expertise regarding any possible environmental effects associated with the project. **Please use the above designation number and description in your reply.** We will incorporate your comments into the required study of the project's environmental impacts.

Should a response not be received **within thirty (30) calendar days** from the date of this letter, it will be assumed that your agency feels that there will be no adverse effects incurred as a result of the proposed project. However, should you find that an extension to the response time is necessary; a reasonable amount may be granted upon request.

If you have any questions regarding this matter, please feel free to contact the undersigned by telephone: (574)-236-4400, or email: dstevens@dlz.com. Thank you for your assistance and prompt response to this coordination request.

Best Regards,

Daniel Stevens | Environmental Scientist

574-236-4400 x614 (office) | 574-236-4471 (fax) | 574-514-8266 (cell)
dstevens@dlz.com | www.dlz.com



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United States Department of the Interior

FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>



In Reply Refer To:

April 19, 2019

Consultation Code: 03E12000-2019-SLI-0876

Event Code: 03E12000-2019-E-04075

Project Name: 191st Street/Grassy Branch Road Intersection Improvements, Des. No. 1700731

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project “may affect” listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <http://ecos.fws.gov/ipac/> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/s7process/index.html>. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html> to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

(812) 334-4261

Project Summary

Consultation Code: 03E12000-2019-SLI-0876

Event Code: 03E12000-2019-E-04075

Project Name: 191st Street/Grassy Branch Road Intersection Improvements, Des. No. 1700731

Project Type: TRANSPORTATION

Project Description: The proposed project involves the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout in Hamilton County, Indiana. The project includes approach improvements, new sidewalk/multiuse path, new lighting, and drainage improvements. It is within Washington Township, USGS Noblesville Topographic Quadrangle, in Sections 29 and 30, Township 19 North, Range 4 East, Hamilton County, Indiana.

The roadway improvements extend along both 191st Street and Grassy Branch Road approaches approximately 500 feet in each direction from the intersection. Drainage improvements (new basin and storm sewer) will extend south of the intersection along Grassy Branch Road approximately 1,700 feet to Cool Creek (also referred to as Wheeler and Beals Legal Drain).

The project purpose is to provide efficient traffic flow, increased safety, added pedestrian facilities and improved drainage.

The proposed project will reconstruct the existing four-way stop intersection of 191st Street and Grassy Branch Road into a two-lane roundabout. The project will include approximately 500 feet of approach work in each direction. A 10 foot wide multiuse trail is included around the circulatory of the roundabout, within the limits of the curb ramps and splitter islands, on all the approaches. The multiuse path will also be included along the south side of 191st Street only, within the project limits. The project will also include new lighting.

Crosswalks and ADA compliant ramps will be included for each leg (at entry and exit locations). The project will include concrete curbs with an enclosed storm sewer network to provide drainage away from the pavement areas. Stormwater detention for this project will involve construction of a new basin along the south approach that will outlet through a new ditch into Cool Creek on the west side of Grassy Branch Road approximately 1,700 south of the intersection.

Land use in the northwest quadrant of the intersection is wooded land. The northeast quadrant contains a church and includes an open water pond (retention basin) within the church's lawn area. The southeast quadrant is agricultural land. The southwest quadrant is residential land. South of the intersection, in the area of the drainage improvements (along the west side of Grassy Branch Road) land use is agricultural.

The project is anticipated to result in impacts to agricultural land, wooded land, Cool Creek, church property, and residential property. Cool Creek will be impacted by proposed drainage improvements which include a new stormwater outfall along the west side of Grassy Branch Road. Cool Creek is the only identified waterway in the project limits. The retention basin located in the northeast quadrant of the intersection will not be impacted by the project.

Terrestrial habitat types present in the project area are forest, sparsely wooded residential property, lawn, and agricultural land. Not including the existing roadway and side slopes, approximately 6.14 acres of such terrestrial habitat area will be affected which consist of approximately 1.54 acres of forest, 0.63 acres of sparsely wooded residential property, 1.27 acres of lawn (church property), and 2.7 acres of agricultural land. Dominant tree species to be removed are sugar maple, beech, black cherry, black walnut, hackberry, and cottonwood. Since the tree removals are along the edge of the roadways the project will not result in the dissection of bat habitat. The northwest quadrant of the intersection was shown on the NWI map as PFO1A, however site investigation of the area found this area is non-wetland.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/40.063338964058104N86.10920915832156W>



Counties: Hamilton, IN

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>



In Reply Refer To:

April 22, 2019

Consultation Code: 03E12000-2019-I-0876

Event Code: 03E12000-2019-E-04089

Project Name: 191st Street/Grassy Branch Road Intersection Improvements, Des. No. 1700731

Subject: Concurrence verification letter for the '191st Street/Grassy Branch Road Intersection Improvements, Des. No. 1700731' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated to verify that the **191st Street/Grassy Branch Road Intersection Improvements, Des. No. 1700731** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

191st Street/Grassy Branch Road Intersection Improvements, Des. No. 1700731

Description

The proposed project involves the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout in Hamilton County, Indiana. The project includes approach improvements, new sidewalk/multiuse path, new lighting, and drainage improvements. It is within Washington Township, USGS Noblesville Topographic Quadrangle, in Sections 29 and 30, Township 19 North, Range 4 East, Hamilton County, Indiana.

The roadway improvements extend along both 191st Street and Grassy Branch Road approaches approximately 500 feet in each direction from the intersection. Drainage improvements (new basin and storm sewer) will extend south of the intersection along Grassy Branch Road approximately 1,700 feet to Cool Creek (also referred to as Wheeler and Beals Legal Drain).

The project purpose is to provide efficient traffic flow, increased safety, added pedestrian facilities and improved drainage.

The proposed project will reconstruct the existing four-way stop intersection of 191st Street and Grassy Branch Road into a two-lane roundabout. The project will include approximately 500 feet of approach work in each direction. A 10 foot wide multiuse trail is included around the circulatory of the roundabout, within the limits of the curb ramps and splitter islands, on all the approaches. The multiuse path will also be included along the south side of 191st Street only, within the project limits. The project will also include new lighting.

Crosswalks and ADA compliant ramps will be included for each leg (at entry and exit locations). The project will include concrete curbs with an enclosed storm sewer network to provide drainage away from the pavement areas. Stormwater detention for this project will involve construction of a new basin along the south approach that will outlet through a new ditch into Cool Creek on the west side of Grassy Branch Road approximately 1,700 south of the intersection.

Land use in the northwest quadrant of the intersection is wooded land. The northeast quadrant contains a church and includes an open water pond (retention basin) within the church's lawn area. The southeast quadrant is agricultural land. The southwest quadrant is residential land. South of the intersection, in the area of the drainage improvements (along

the west side of Grassy Branch Road) land use is agricultural.

The project is anticipated to result in impacts to agricultural land, wooded land, Cool Creek, church property, and residential property. Cool Creek will be impacted by proposed drainage improvements which include a new stormwater outfall along the west side of Grassy Branch Road. Cool Creek is the only identified waterway in the project limits. The retention basin located in the northeast quadrant of the intersection will not be impacted by the project.

Terrestrial habitat types present in the project area are forest, sparsely wooded residential property, lawn, and agricultural land. Not including the existing roadway and side slopes, approximately 6.14 acres of such terrestrial habitat area will be affected which consist of approximately 1.54 acres of forest, 0.63 acres of sparsely wooded residential property, 1.27 acres of lawn (church property), and 2.7 acres of agricultural land. Dominant tree species to be removed are sugar maple, beech, black cherry, black walnut, hackberry, and cottonwood. Since the tree removals are along the edge of the roadways the project will not result in the dissection of bat habitat. The northwest quadrant of the intersection was shown on the NWI map as PFO1A, however site investigation of the area found this area is non-wetland.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat. Therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat^[1]?

[1] See [Indiana bat species profile](#)

Automatically answered

Yes

2. Is the project within the range of the Northern long-eared bat^[1]?

[1] See [Northern long-eared bat species profile](#)

Automatically answered

Yes

3. Which Federal Agency is the lead for the action?

A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction^[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces^[1]?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum^[1]?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

No

7. Is the project located **within** a karst area?

No

8. Is there *any* suitable^[1] summer habitat for Indiana Bat or NLEB **within** the project action area^[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

Yes

9. Will the project remove *any* suitable summer habitat^[1] and/or remove/trim any existing trees **within** suitable summer habitat?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

No

11. Have presence/probable absence (P/A) summer surveys^{[1][2]} been conducted^{[3][4]} **within** the suitable habitat located within your project action area?

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

[3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

[4] Negative presence/probable absence survey results obtained using the [summer survey guidance](#) are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

No

12. Does the project include activities **within documented Indiana bat habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

13. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

Yes

14. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

B) During the inactive season

15. Does the project include activities **within documented NLEB habitat**^{[1][2]}?

[1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry triangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

[2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

No

16. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

Yes

17. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

B) During the inactive season

18. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

Yes

19. Will the tree removal alter *any* **documented** Indiana bat or NLEB roosts and/or alter any surrounding summer habitat **within** 0.25 mile of a documented roost?

No

20. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

No

21. Are *all* trees that are being removed clearly demarcated?

Yes

22. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

No

23. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

No

24. Does the project include slash pile burning?

No

25. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

No

26. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

27. Will the project involve the use of **temporary** lighting *during* the active season?

Yes

28. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

Yes

29. Will the project install new or replace existing **permanent** lighting?

Yes

30. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **permanent** lighting will be installed or replaced?

Yes

31. Does the project include percussives or other activities (**not including tree removal/trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?

Yes

32. Will the activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Yes

33. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Yes

34. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

Yes

35. Will the project raise the road profile **above the tree canopy**?

No

36. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, conducted during the active season, and are not within documented habitat

37. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect determination in this key?

Automatically answered

Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the inactive season

38. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost

39. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

Automatically answered

Yes, because the tree removal/trimming that occurs outside of the active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost

40. **General AMM 1**

Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

Yes

41. **Tree Removal AMM 1**

Can *all* phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal^[1] in excess of what is required to implement the project safely?

Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

[1] The word “trees” as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS’ current summer survey guidance for our latest definitions of suitable habitat.

Yes

42. Tree Removal AMM 2

Can *all* tree removal activities be restricted to when Indiana bats are not likely to be present (e.g., the inactive season)^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Automatically answered

Yes

43. Tree Removal AMM 2

Can *all* tree removal activities be restricted to when Northern long-eared bats are not likely to be present (e.g., the inactive season)^[1]?

[1] Coordinate with the local Service Field Office for appropriate dates.

Automatically answered

Yes

44. Tree Removal AMM 3

Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

Yes

45. Tree Removal AMM 4

Can the project avoid cutting down/removal of *all* (1) **documented**^[1] Indiana bat or NLEB roosts^[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

[1] The word documented means habitat where bats have actually been captured and/or tracked.

[2] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

Yes

46. **Lighting AMM 1**

Will *all* **temporary** lighting used during the removal of suitable habitat and/or the removal/trimming of trees within suitable habitat be directed away from suitable habitat during the active season?

Yes

47. **Lighting AMM 1**

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

48. **Lighting AMM 2**

Does the lead agency use the BUG (Backlight, Uplight, and Glare) system developed by the Illuminating Engineering Society^{[1][2]} to rate the amount of light emitted in unwanted directions?

[1] Refer to [Fundamentals of Lighting - BUG Ratings](#)

[2] Refer to [The BUG System—A New Way To Control Stray Light](#)

Yes

49. **Lighting AMM 2**

Will the **permanent** lighting be designed to be as close to 0 for all three BUG ratings as possible, with a priority of "uplight" of 0 and "backlight" as low as practicable?

Yes

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

Yes

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

No

3. How many acres^[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

[1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

2.17

Avoidance And Minimization Measures (AMMs)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (AMMs):

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

LIGHTING AMM 2

When installing new or replacing existing permanent lights, use downward-facing, full cut-off lens lights (with same intensity or less for replacement lighting); or for those transportation agencies using the BUG system developed by the Illuminating Engineering Society, be as close to 0 for all three ratings with a priority of "uplight" of 0 and "backlight" as low as practicable.

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

TREE REMOVAL AMM 4

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on March 16, 2018. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

INDOT has reviewed the determination key and has completed the verification process to forward the project to USFWS for review.

Kari Carmany-George
Environmental Section Manager, Greenfield District
32 South Broadway
Greenfield, IN 46140
Office: (317) 467-3467 (internal ext 14898)
Email: <https://protect-us.mimecast.com/s/MDb1CADmR9f9v52viGfDY5>

Subject: IPaC review - Des. No.: 1700731 - 191st Street/Grassy Branch Road - Hamilton County, Indiana

191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Dan

Daniel Stevens

From: Havard, John E. <JHavard@citizensenergygroup.com>
Sent: Monday, November 04, 2019 12:16 PM
To: Daniel Stevens
Cc: Haseeb A. Ghumman, PE, PTOE; Faisal Saleem, PE, CPESC; Jason Stone
Subject: RE: SPWA - 191st Street/Grassy Branch Road Intersection, Des 1700731

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That is perfect – thanks very much!

From: Daniel Stevens <dsteven@dlz.com>
Sent: Monday, November 4, 2019 12:12 PM
To: Havard, John E. <JHavard@citizensenergygroup.com>
Cc: Haseeb A. Ghumman, PE, PTOE <hghumman@dlz.com>; Faisal Saleem, PE, CPESC <fsaleem@dlz.com>; Jason Stone <jstone@dlz.com>
Subject: RE: SPWA - 191st Street/Grassy Branch Road Intersection, Des 1700731

WARNING: This email originated outside of Citizens Energy Group. **DO NOT CLICK** links or attachments unless you recognize the sender and know the content is safe.

Mr. Havard,

Thank you for your response. This project will include protective measures including adherence to stormwater best management practices, INDOT standard specifications, and the material handling and spill prevention plan prepared as part of the SWPPP/Rule 5 Permit.

Best Regards,

Dan

Daniel Stevens | Environmental Scientist

574-236-4400 x614 (office) | 574-514-8266 (cell)
dsteven@dlz.com | www.dlz.com



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From: Havard, John E. <JHavard@citizensenergygroup.com>
Sent: Monday, November 04, 2019 10:51 AM
To: Daniel Stevens <dsteven@dlz.com>
Subject: RE: SPWA - 191st Street/Grassy Branch Road Intersection, Des 1700731

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Mr. Stevens,

Thank you for sending over this information. We request that protective measures be in place to prevent any fuel or chemicals that are utilized for construction activities from entering Cool Creek. Typically this can be accomplished by writing a spill prevention, control and counter measures plan for the project. Appropriate spill prevention and response materials should be in place at the jobsite. Employees at the jobsite should be trained on the contents of the plan and should know what response measures should be taken in the event of a spill.

Regards,

John Havard, P.E.

Manager, Environmental Technical Programs
Citizens Energy Group
(O) 317-693-8716



From: Daniel Stevens <dstevens@dlz.com>

Sent: Wednesday, October 30, 2019 11:33 AM

To: Havard, John E. <JHavard@citizensenergygroup.com>

Subject: SPWA - 191st Street/Grassy Branch Road Intersection, Des 1700731

WARNING: This email originated outside of Citizens Energy Group. **DO NOT CLICK** links or attachments unless you recognize the sender and know the content is safe.

Hi John,

I attached project information for your review relating to the Source Water Protection Area.

If you conclude that the project does not pose a risk to the Source Water Protection Area, would you please send me email correspondence with a statement similar to the following: *"The 191st Street/Grassy Branch Road Intersection Project (Des No.: 1700731) as currently proposed does not pose a threat to the Source Water Protection Area."*

Please feel free to contact me with any questions or if you need any further information.

Thanks,

Dan

Daniel Stevens | Environmental Scientist

574-236-4400 x614 (office) | 574-514-8266 (cell)
dstevens@dlz.com | www.dlz.com

Daniel Stevens

From: Michael Pearce <mpearce@westfield.in.gov>
Sent: Wednesday, January 8, 2020 4:12 PM
To: Haseeb A. Ghumman, PE, PTOE; Faisal Saleem, PE, CPESC
Cc: Daniel Stevens; David.Lucas@hamiltoncounty.in.gov
Subject: RE: 191st Street and Grassy Branch RAB Project (Des. No. 1700731)

EXTERNAL: Message origin is from an external network. Use proper judgment and caution when opening attachments, clicking links, or responding to this email.

Haseeb,

We currently don't have any plans to put a trail between Grassy Branch and Flippins along 191st in the immediate future. According to GIS, this still belongs to the County anyway, so we wouldn't have the jurisdiction unless it's annexed.

Thanks,

Michael Pearce | Project Engineer

Public Works | 2706 E 171st St | Westfield, IN 46074
mpearce@westfield.in.gov | 317-419-1594



From: Haseeb A. Ghumman, PE, PTOE <hghumman@dlz.com>
Sent: Wednesday, January 8, 2020 3:51 PM
To: Michael Pearce <mpearce@westfield.in.gov>; Faisal Saleem, PE, CPESC <fsaleem@dlz.com>
Cc: Daniel Stevens <dsteven@dlz.com>; David.Lucas@hamiltoncounty.in.gov
Subject: RE: 191st Street and Grassy Branch RAB Project (Des. No. 1700731)

Michael,

One follow up question. Is there any trail planned on the west of the intersection (north of 191st). If no development planned yet, we will need to remove that trail segment from this RAB job, as per INDOT Env. Section comments

Thanks,

Haseeb

From: Michael Pearce <mpearce@westfield.in.gov>
Sent: Tuesday, January 7, 2020 9:39 AM
To: Faisal Saleem, PE, CPESC <fsaleem@dlz.com>
Cc: Daniel Stevens <dsteven@dlz.com>; Haseeb A. Ghumman, PE, PTOE <hghumman@dlz.com>
Subject: RE: 191st Street and Grassy Branch RAB Project (Des. No. 1700731)

EXTERNAL: Message origin is from an external network. Use proper judgment and caution when opening attachments, clicking links, or responding to this email.

We have a development that is looking at going in around the RAB at 191st St & East St that extends to Flippins Road. They would be responsible for putting in the trail when they build out. We currently don't have any development plans for 191st St between Flippins and Grassy Branch, so there is no trail plans for this section at the moment.

Thanks,

Michael Pearce | Project Engineer

Public Works | 2706 E 171st St | Westfield, IN 46074
mpearce@westfield.in.gov | 317-419-1594



From: Faisal Saleem, PE, CPESC <fsaleem@dlz.com>
Sent: Tuesday, January 7, 2020 9:12 AM
To: Michael Pearce <mpearce@westfield.in.gov>
Cc: Daniel Stevens <dstevens@dlz.com>; Haseeb A. Ghumman, PE, PTOE <hghumman@dlz.com>
Subject: RE: 191st Street and Grassy Branch RAB Project (Des. No. 1700731)

Thanks Michael.

Do you also know if there are any plans at this point for any trail construction along 191st Street west of our project?

Thanks

Faisal Saleem, PE, CPESC | Civil Engineer

317-633-4120 x229 (office)
fsaleem@dlz.com | www.dlz.com



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EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

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From: Michael Pearce <mpearce@westfield.in.gov>
Sent: Tuesday, January 07, 2020 8:50 AM
To: Faisal Saleem, PE, CPESC <fsaleem@dlz.com>

Cc: Daniel Stevens <dstevens@dlz.com>; Haseeb A. Ghumman, PE, PTOE <hghumman@dlz.com>

Subject: RE: 191st Street and Grassy Branch RAB Project (Des. No. 1700731)

EXTERNAL: Message origin is from an external network. Use proper judgment and caution when opening attachments, clicking links, or responding to this email.

Hi Faisal,

We don't have a proposed schedule from the developer at this point, but based on my discussion with the inspector for that project, our best guess is it should be completed sometime in the middle of this year (maybe June – July 2020). If you need a more detailed schedule, I can have him reach out to the developer. Let me know.

Thanks,

Michael Pearce | Project Engineer

Public Works | 2706 E 171st St | Westfield, IN 46074

mpearce@westfield.in.gov | 317-419-1594



From: Faisal Saleem, PE, CPESC <fsaleem@dlz.com>

Sent: Tuesday, December 31, 2019 9:51 AM

To: Michael Pearce <mpearce@westfield.in.gov>

Cc: Daniel Stevens <dstevens@dlz.com>; Haseeb A. Ghumman, PE, PTOE <hghumman@dlz.com>

Subject: 191st Street and Grassy Branch RAB Project (Des. No. 1700731)

Good morning Michael,

Do you know the construction schedule for the new trail (Lindley Run project) that our roundabout project is connecting at east end?

Thanks

APPENDIX D

Section 106 Documentation



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix D

**FEDERAL HIGHWAY ADMINISTRATION'S
SECTION 4(F) COMPLIANCE REQUIREMENTS (for historic properties) AND
SECTION 106 FINDINGS AND DETERMINATIONS
AREA OF POTENTIAL EFFECT
ELIGIBILITY DETERMINATIONS
EFFECT FINDING
191st STREET/GRASSY BRANCH INTERSECTION IMPROVEMENTS
WASHINGTON TOWNSHIP, HAMILTON COUNTY, INDIANA
DES. NO.: 1700731**

AREA OF POTENTIAL EFFECTS (Pursuant to 36 CFR Section 800.4(a)(1))

The Area of Potential Effects (APE) delineated for this project extends approximately 2,000 feet in each direction from the project end points to Shady Nook Road on the east, 186th Street on the south, Flippins Road on the west, and 196th Street on the north. Refer to the Section 800.11(d) Document, Appendix A, Pages 22 -24 for graphics depicting the APE.

ELIGIBILITY DETERMINATIONS (Pursuant to 36 CFR 800.4(c)(2))

INDOT, acting on behalf of FHWA-IN, has determined that no historic properties are located within the APE.

EFFECT FINDING

INDOT, acting on behalf of FHWA-IN, has determined a "No Historic Properties Affected" finding is appropriate for this undertaking. INDOT respectfully requests the Indiana State Historic Preservation Officer provide written concurrence with the Section 106 determination of effect.

SECTION 4(F) COMPLIANCE REQUIREMENTS (for historic properties)

This undertaking will not convert property from any Section 4(f) historic property to a transportation use; INDOT, acting on behalf of FHWA-IN, has determined the appropriate Section 106 finding is "No Historic Properties Affected"; therefore, no Section 4(f) evaluation is required.

Anuradha V. Kumar

Anuradha V. Kumar, For FHWA
Manager
INDOT Cultural Resources Office

01/28/2019

Approved Date

**FEDERAL HIGHWAY ADMINISTRATION
DOCUMENTATION OF SECTION 106 FINDING OF
NO HISTORIC PROPERTIES AFFECTED
SUBMITTED TO THE STATE HISTORIC PRESERVATION OFFICER
PURSUANT TO 36 CFR SECTION 800.4(d)(1)
191st STREET/GRASSY BRANCH INTERSECTION IMPROVEMENTS
WASHINGTON TOWNSHIP, HAMILTON COUNTY, INDIANA
DES. NO.: 1700731**

1. DESCRIPTION OF THE UNDERTAKING

A. Project Description

This project is located in Hamilton County, Indiana within Washington Township. It can be found on the *Noblesville, Indiana* Quadrangle, in Sections 29 and 30, Township 19 North, Range 4 East. Refer to Figures 1 – 3. The project is for improvements to the 191st Street/Grass Branch Road Intersection. Refer to Appendix A for project area photographs and key maps.

The Hamilton County Board of Commissioners is proposing to utilize a federal highway safety improvement grant to construct a roundabout at the 191st Street and Grassy Branch Road intersection. The primary purpose and need for this project is to increase safety and mobility at this intersection.

The proposed project will reconstruct the existing four-way stop intersection into a two-lane roundabout. The project will include approximately 500 feet of approach work in each direction. A 10' wide multiuse trail is included around the circulatory of the roundabout, within the limits of the curb ramps and splitter islands, on all the approaches. The multiuse path will also be included along the south side of 191st Street only, within the project limits. The project will also include ornamental lighting. Crosswalks and ADA compliant ramps will be included for each leg (at entry and exit locations). The project will include concrete curbs with an enclosed storm sewer network to provide drainage away from the pavement areas. Stormwater detention for this project will utilize the expansion of the existing drainage basin located in the northeast quadrant of the intersection and construction of a new linear underground piped detention system that will outlet into Cool Creek on the west side of Grassy Branch Road approximately 1,700 ft. south of the intersection. This piped detention system will be a part of the trunk storm sewer piping required to pick up the individual curb inlets, and will be oversized to store the required detention.

The project's right of way needs have not been determined; however, it is anticipated that acquisition of more than 0.5 acre will be required. Access to all properties will be maintained during construction. It is anticipated that the intersection will be closed during construction.

B. Applicability

Per FHWA-IN Procedures, Federal-aid highway construction projects qualify as "undertakings" as defined in 36 CFR 800.16(y) and are subject to review under FHWA-IN/INDOT Section 106 Procedures

(herein referred to as the Procedures). Federal-aid funds would be used for planning and/or construction of the proposed improvements. Section 106 is applicable.

C. Area of Potential Effects (APE)

Per 36 CFR Section 800.4(a)(1), the APE delineated for this project extends approximately 2,000 feet in each direction from the project end points to Shady Nook Road on the east, 186th Street on the south, Flippins Road on the west, and 196th Street on the north. (Appendix A, Pages 22-24).

2. EFFORTS TO IDENTIFY HISTORIC PROPERTIES

A. Historic Properties Report

H&H Associates, LLC (H&H) completed a long-form Historic Properties Report (HPR) that provided recommendations concerning the historic significance of the properties within the APE. H&H initiated identification efforts in November 2017 by reviewing the National Register of Historic Places (NRHP), the Indiana Register of Historic Sites and Structures, the State Historic Architectural and Archaeological Research Database (SHAARD), the Indiana Historical Bureau's Historical Markers Database, and the 1992 Hamilton County Interim Historic Sites and Structures Inventory for previously-identified properties. Primary and secondary documentary research included numerous published county and local histories, historical and current atlases and maps, and online resources. Additionally, on November 13, 2017 the historian conducted a field survey by walking all the streets within the APE and taking photographs to identify and evaluate any historic resources present. As a result of identification and evaluation efforts, no properties within the project APE were recommended eligible for listing on the NRHP. The Abstract and Conclusions section of the HPR are presented as Appendix A Pages 1–3.

B. Archaeological Survey

NS Services, LLC conducted an archaeological records check and Phase Ia Archaeological Field Reconnaissance of the project area. The report notes that the archaeological reconnaissance located no archaeological sites within the project area and recommended that the project be allowed to proceed as planned. The Conclusions section from the Phase Ia Archaeological Field Reconnaissance of the project area is attached as Appendix A, Pages 25–26.

C. Consultation

Per FHWA procedures, in addition to the State Historic Preservation Officer (SHPO), the agencies listed below were invited to participate as consulting parties for this undertaking. Invited agencies were requested to indicate whether the agency agreed or did not agree to participate as a consulting party, within 30 days of receipt of the invitation. It was noted that if the desire to participate as a consulting party was not indicated, the agency would not be considered a consulting party and would not receive further information about the undertaking unless the scope changed.

Invited Section 106 Consulting Parties	Status
Hamilton County Board of Commissioners	No Response - Declined
Indiana Landmarks Center	Accepted
Hamilton County Historical Society/Museum of History	No Response - Declined
Hamilton County Historian	No Response - Declined
Hamilton County Genealogy Society	No Response - Declined
Westfield-Washington Historical Society	No Response - Declined
Hamilton County Highway Engineer	No Response - Declined
Indianapolis Metropolitan Planning Organization	No Response - Declined
Delaware Tribe of Oklahoma	No Response - Declined
Delaware Tribe of Indians, Oklahoma	No Response - Declined
Eastern Shawnee Tribe of Oklahoma	No Response - Declined
Miami Tribe of Oklahoma	Accepted
Peoria Tribe of Indians Oklahoma	No Response - Declined
Pokagon Band of Potawatomi Indians	No Response - Declined

A hard copy of the early coordination letter was sent to the SHPO on June 4, 2018, and the other consulting parties received it via email on June 4, 2018 and June 7, 2018 (Appendix B, Pages 1 – 10). The early coordination letter noted the availability of the HPR, which contains information regarding the project's APE, and the identification of historic properties within the APE. Recipients of this consultation request were requested to provide comments within 30 days.

Per FHWA Procedures, the SHPO is an automatic consulting party. The SHPO was requested to identify the need to include additional consulting parties. No other consulting parties were identified.

In a letter dated June 12, 2018 (Appendix B, Pages 13-14), the Miami tribe of Oklahoma accepted the invitation to participate as a consulting party and expressed no objection to the project proceeding as planned.

In a letter dated June 29, 2018 (Appendix B, Page 15), the Indiana Landmarks Central Regional Office concurred with the selected boundaries for the project's APE and do not object to the historian's findings that there are currently no resources listed in or eligible for listing in the NRHP within the APE.

The SHPO provided comments dated July 9, 2018 (Appendix B, Pages 16-17) indicating that the APE in the HPR appears to be appropriate for this project and that they agreed with the HPR's recommendations that no resources within the APE are NRHP eligible. The SHPO also concurred with the recommendations of the archeological report and agreed that no further archaeological investigations will be required for areas that were subjected to archaeological reconnaissance survey.

No responses were received from the other consulting parties. Consulting Party correspondence is presented in Appendix B.

A public notice will be issued in a locally available newspaper concurrently with the review of this document by consulting parties. The public notice will request comments from the general public and will provide the appropriate contact information to do so. This document will be revised as necessary after the public notice if comments are received.

Following the 30-day comment period(s), if there is no disagreement with the “No Historic Properties Affected” finding from consulting parties or the public, the Section 106 process will be considered complete.

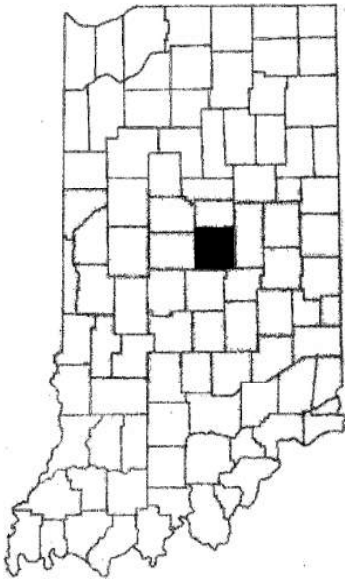
3. BASIS FOR FINDING

Investigations conducted by qualified professionals did not identify the existence of historic properties within the project’s APE, and no consulting party expressed objection to the recommendations of the HPR or the archaeological report. Therefore, a “No Historic Properties Affected” finding has been made for this undertaking.

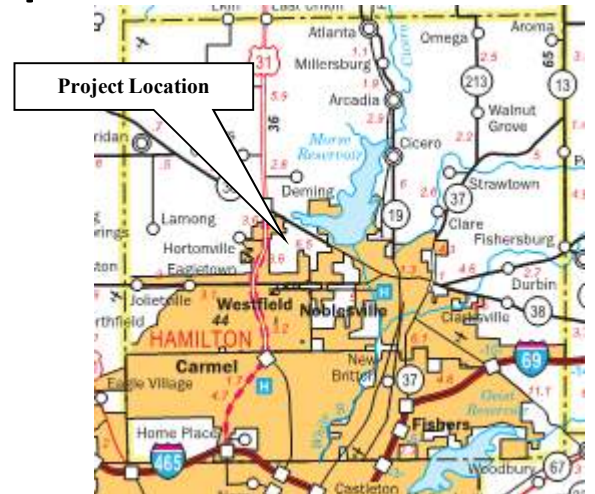
A. Continued Consultation

INDOT’s Findings, made on behalf of FHWA, and supporting Section 800.11(d) documentation are hereby provided to the SHPO and consulting parties for a final 30-day consultation/comment period.

Hamilton County



Location Map



<http://maps.indiana.edu/>

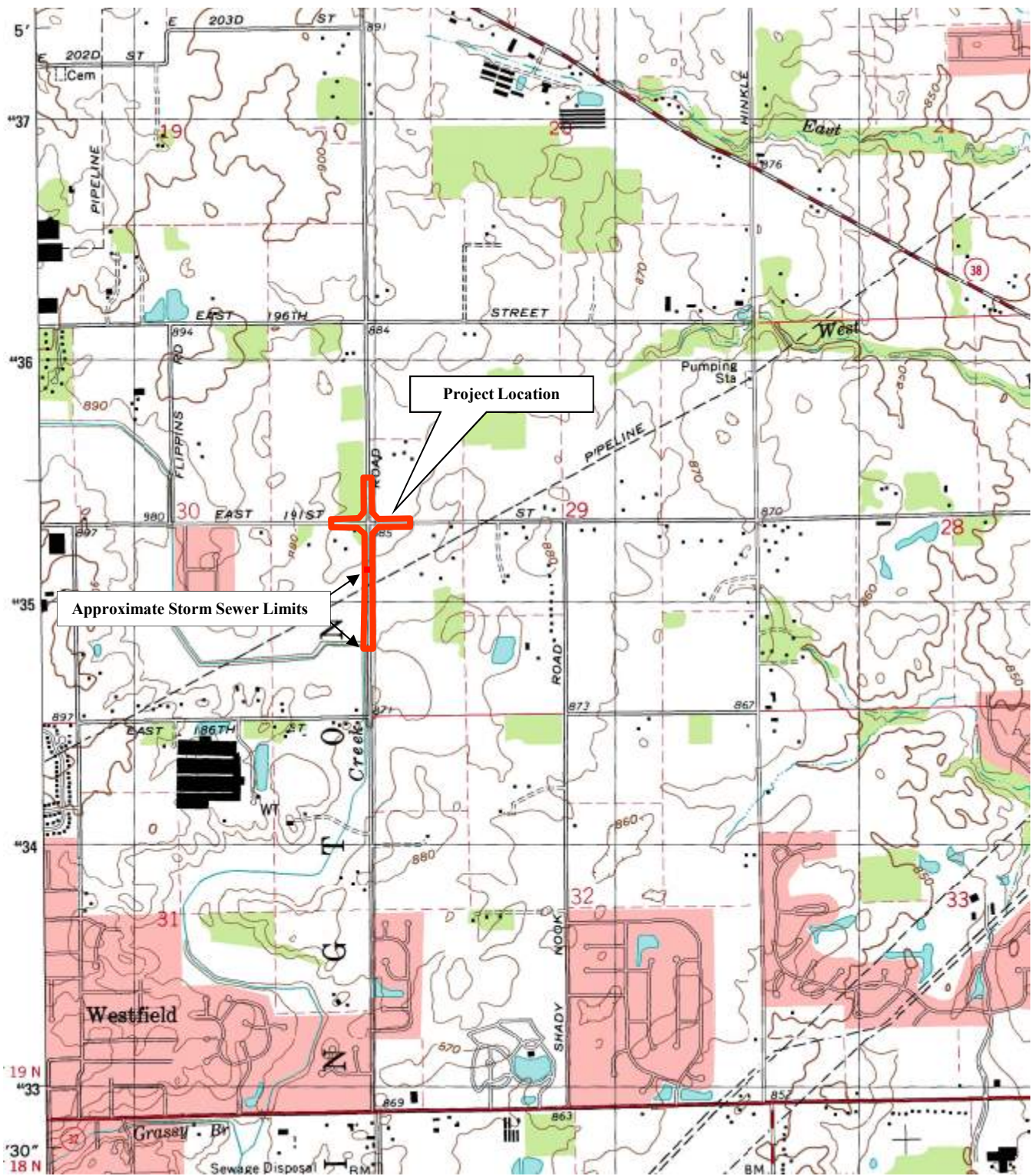


191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Scale: NTS

Figure: 1

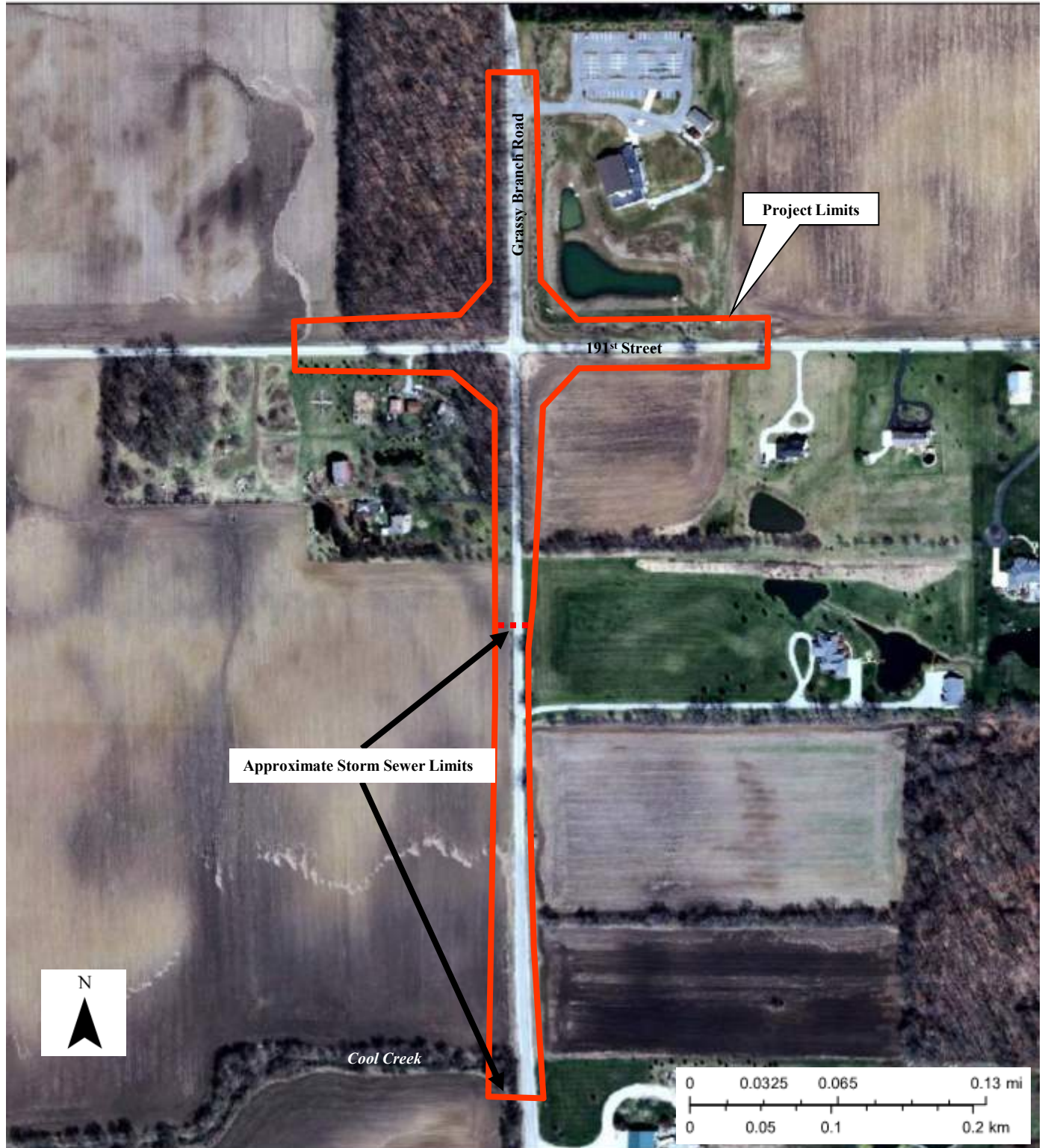
USGS Quadrangle Map



USGS Noblesville Quadrangle Map

	<p>191st Street/Grassy Branch Road Intersection Improvements Des. No.: 1700731 Hamilton County, Indiana</p>	<p>Scale: 1"=2000'</p> <p>Figure: 2</p>
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Aerial



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Scale: See Map

Figure: 3



1) Looking north along Grassy Branch Road from 191st Street



2) Looking east along 191st Street from Grassy Branch Road



3) Looking south along Grassy Branch Road from 191st Street




4) Looking west along 191st Street from Grassy Branch Road



5) Looking south along Grassy Branch Road toward Cool Creek
(also referred to as Wheeler and Beals Legal Drain)



6) Looking north at the pond feature in northeast quadrant of the intersection

	<p>191st Street/Grassy Branch Road Intersection Improvements Des. No.: 1700731 Hamilton County, Indiana</p>	<p>Photographs</p>
		<p>Figure 4</p>

SECTION 106 APPENDIX A

Pages Excerpted from the Historic Properties Report (H&H Associates. LLC, 2017)



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix A

**HISTORIC PROPERTIES REPORT FOR:
191ST STREET AND GRASSY BRANCH ROAD
INTERSECTION IMPROVEMENT PROJECT
CITY OF NOBLESVILLE, HAMILTON COUNTY, IN**

DES NO: 1700731

FEDERAL PROJECT NO: PENDING

12/24/2017

PREPARED FOR DLZ INDIANA, LLC

Candace Hudziak

H&H Associates, LLC
Principal Investigator: Candace Hudziak, M.A.
218 E. North Street
Greenfield, IN 46140
317.462.7177
historian@hhpast.com

Abstract

191st Street and Grassy Branch Road Intersection Improvement Project City of Noblesville, Washington Township, Hamilton County, Indiana

In November 2017 DLZ Indiana, LLC contracted H&H Associates, LLC to conduct an architectural and historical investigation in support of the above-named project located in west-central Hamilton County, Indiana, which is anticipated to begin construction letting in August 2021.

The project historian who meets or exceeds the Secretary of the Interior's standards for Section 106 work identified and evaluated historic properties within the proposed Area of Potential Effects (APE) for this project. Historic properties were identified and evaluated in accordance with Section 106, National Historic Preservation Act (NHPA) of 1966, as amended, and CFR Part 800 (Revised January 2001), Final Rule on Revision of Current Regulations, December 12, 2000, and incorporating amendments effective August 5, 2004.

This Historic Property Report documents the methodology and findings of eligibility as part of the Section 106 process. A field survey and documentation review were completed for properties in the APE, including above ground resources previously recorded in the 1992 *Hamilton County Historic Sites and Structures Inventory* (IHSSI). Hamilton County's survey data is also searchable in the State Historic Architectural and Archaeological Research Database (SHAARD) and SHAARD's companion GIS website known as SHAARDGIS.

As a result of the identification and evaluation efforts for this project two properties were determined to meet the fifty-year age requirement and to retain a sufficient degree of integrity for National Register of Historic Places (NRHP) evaluation. After applying the NRHP's eligibility criteria, however, the properties failed to demonstrate sufficient significance under the four Criteria for Evaluation to be recommended eligible for listing. Candace Hudziak, a historian who meets or exceeds the Secretary of the Interior's Professional Standards, conducted the fieldwork and prepared this report.

Conclusion

In summary, a long-form HPR was prepared that includes a literature review and field reconnaissance in support of the intersection improvement project at 191st Street and Grassy Branch Rd located in the City of Noblesville in south-central Hamilton County, Indiana. No properties located within the APE are listed in either the NRHP or the Indiana Register of Historic Sites and Structures (SR).

A field survey identified a c.1890 T-plan farmstead at 19329 Grassy Branch Rd and a c.1840 I-house at 3933 E 191st St that met the fifty-year age requirement from the construction letting date, which is scheduled for August 2021, and that both retained a sufficient amount of integrity. After evaluating these properties using the NRHP's Criteria for Eligibility, neither property demonstrated adequate significance for NRHP eligibility, and therefore neither property is recommended NRHP eligible.

Appendix A: Project Site Photographs and Key Maps



A.1: Facing south on Grassy Branch Rd from the north end of the APE



A.2: 19506 Grassy Branch Rd facing northwest



A.3: 19329 Grassy Branch Rd facing east



A.4: Crossroads Church, 19201 Grassy Branch Rd, facing southeast



A.5: Project intersection facing south from Grassy Branch Rd



A.6: 3990 E 191st St facing northeast



A.7: Facing west on 191st St from the east end of the APE



A.8: 19024 Shady Nook Rd facing southwest



A.9: 3933 E 191st St (Chance Farm) facing south



A.10: 3911 E 191st St facing southwest



A.11: 3609 E 191st St facing southwest



A.12: 3525 E 191st St facing south



A.13: 3501 E 191st St facing southeast



A.14: 18921 Grassy Branch Rd facing east



A.15: 18707 Grassy Branch Rd facing southeast



A.16: Facing north on Grassy Branch Rd from the south end of the APE



A.17: Culvert structure under E 186th St facing northwest



A.18: 19020 Grassy Branch Rd facing southwest



A.19: 19036 Grassy Branch Rd facing northwest



A.20: 2829 E 191st St facing south



A.21: 2605 E 191st St facing south



A.22: 2603 E 191st St facing south



A.23: View of Northbrook Circle facing south from 191st St



A.24: View of the west side of Northbrook Circle facing northwest from David Dr



A.25: View of the east side of Crestview Ct facing northeast from David Dr



A.26: View of the north side of David Dr facing northwest from Crestview Ct



A.27: Facing east on 191st St from the west end of the APE



A.28: Culvert structure under 191st St facing southeast

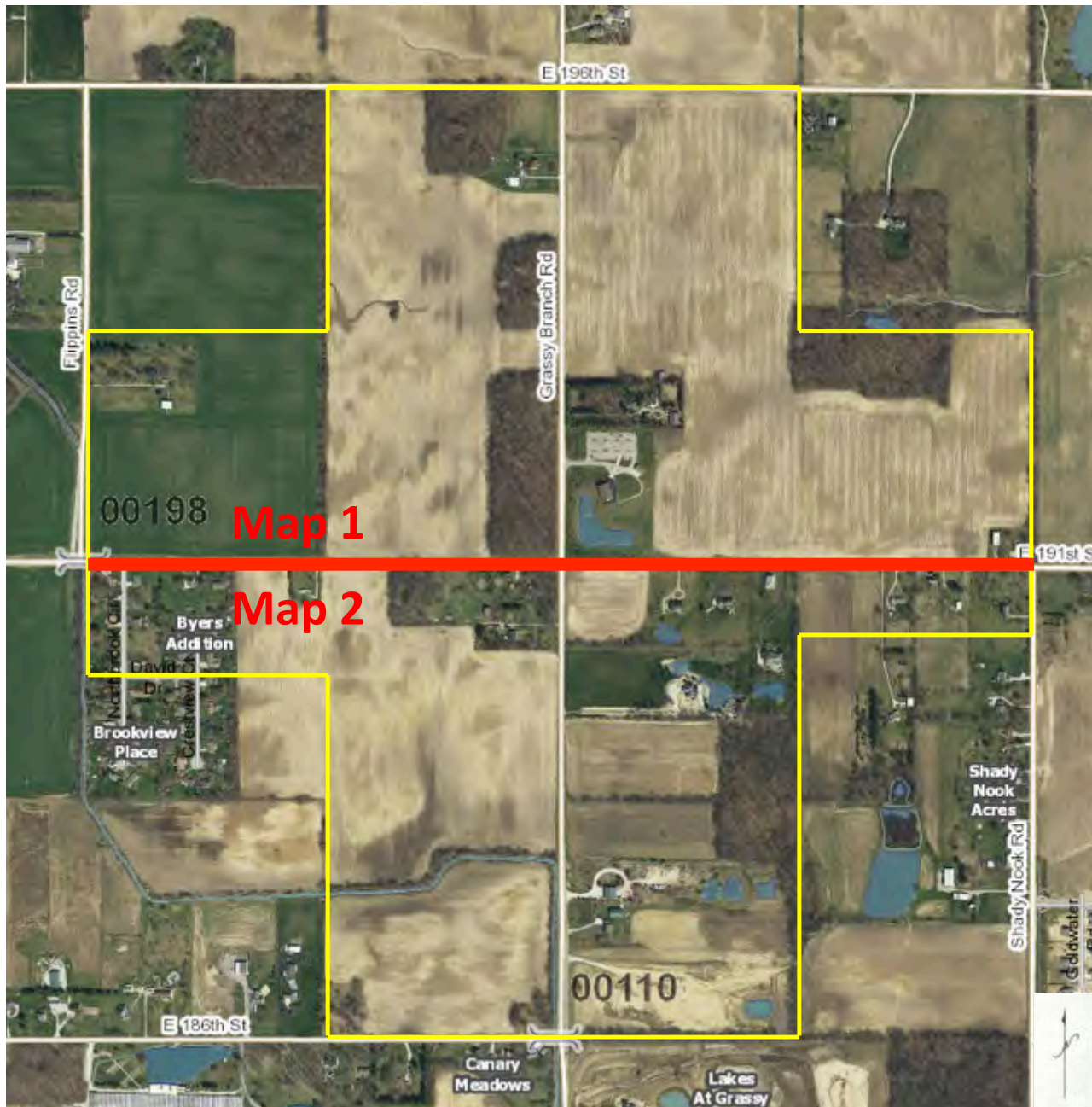


A.29: Culvert structure with iron guardrails under Flippins Rd facing northeast



A.30: 19303 Flippins Rd facing northeast

Photograph Key Maps



Overview key map

The following two pages show close up views of maps 1 and 2 identifying photograph locations
Scale: 1 inch = 900 feet

2016 aerial images courtesy of Hamilton County Flex Viewer GIS:

<http://gis.hamiltoncounty.in.gov/FlexViewer/Index.html>



Map 1 with photograph locations 1-6, 29-30 identified
 Scale: 1 inch = 675 feet



Map 2 with photograph locations 7-28 identified
 Scale: 1 inch = 675 feet

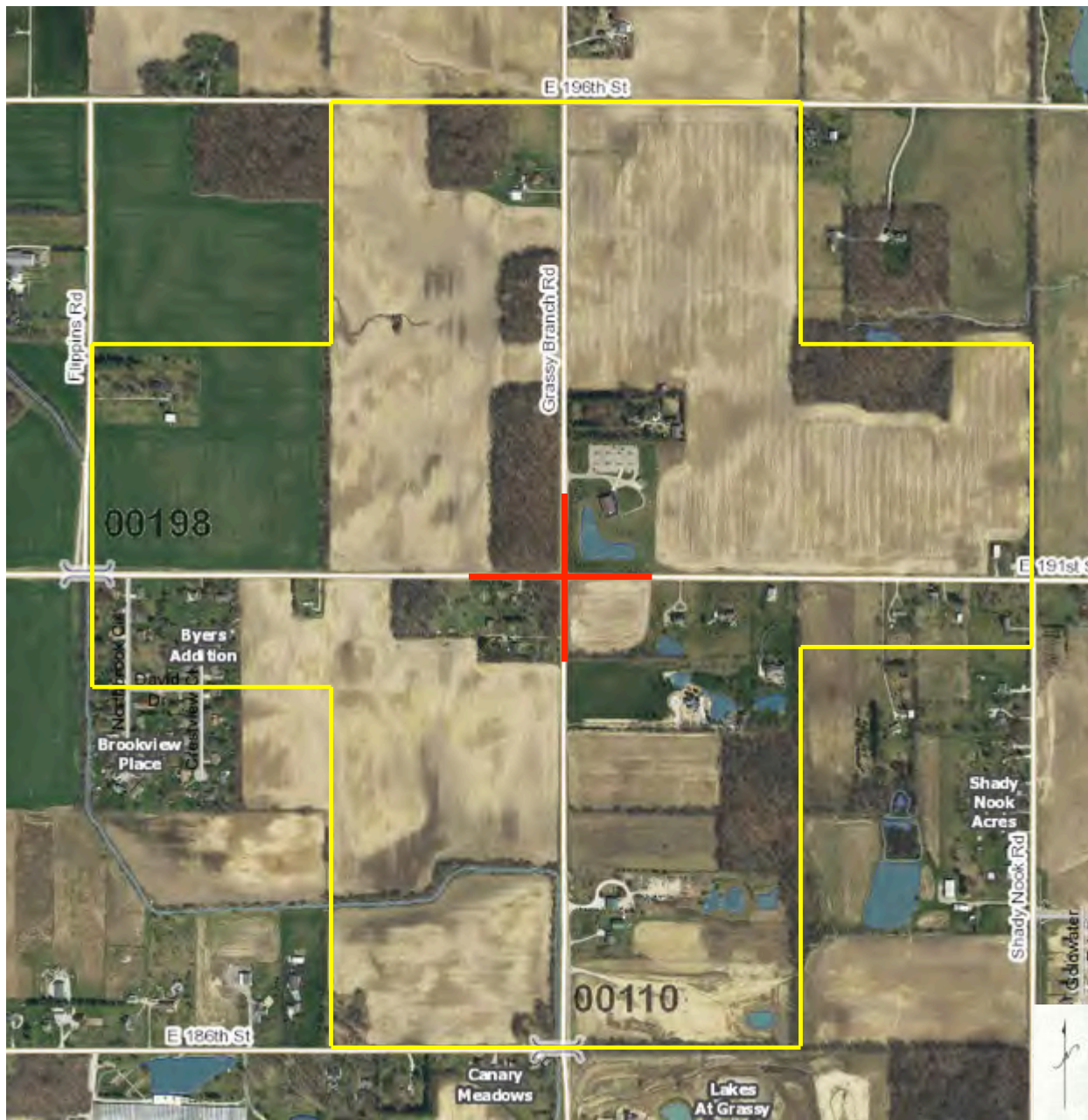


Fig B.7: Aerial map with the APE boundary in yellow and project limits in red
Refer to Figs B.8-B.9 for close up views of the northern and southern halves of the APE
(Scale: 1 inch = 900 feet)

2016 Aerial images courtesy of Hamilton Co Flex Viewer:
<http://gis.hamiltoncounty.in.gov/FlexViewer/Index.html>



Fig B.8: Close up view of the northern part of the APE with a portion of the project limits in red
 (Scale: 1 inch = 675 feet)

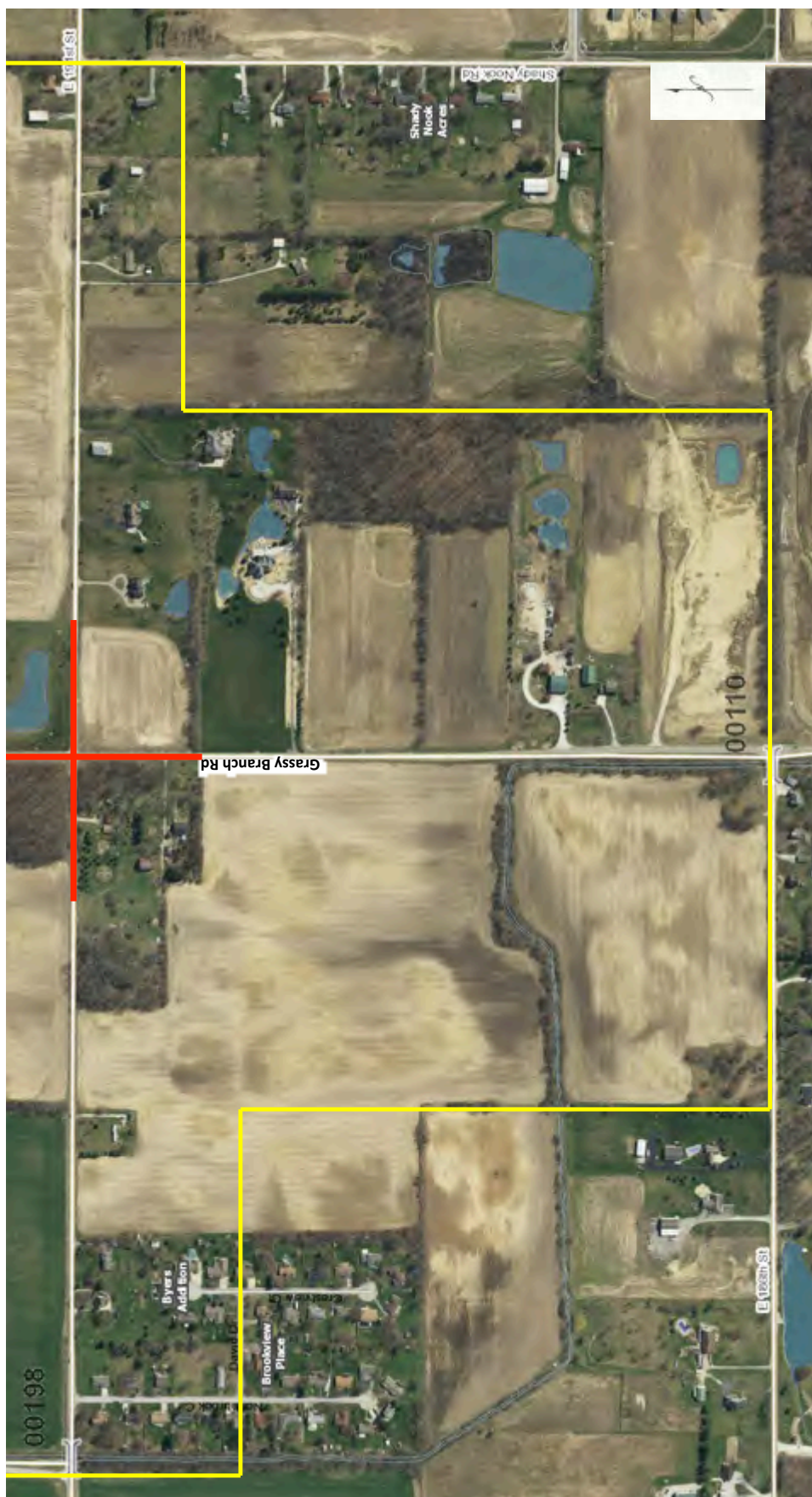


Fig B.9: Close up view of the southern part of the APE with a portion of the project limits in red
 (Scale: 1 inch = 675 feet)



INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (1-11)

INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY

402 West Washington Street, Room W274
Indianapolis, Indiana 46204-2739
Telephone Number: (317) 232-1646
Fax Number: (317) 232-0693
E-mail: dhpa@dnr.IN.gov

Where applicable, the use of this form is recommended but not required by the Division of Historic Preservation and Archaeology.

Author: Stacy Bennett and Jeff Plunkett

Date (month, day, year): May 8, 2018

Project Title: Phase Ia Archaeological Field Reconnaissance for Intersection Improvement - Roundabout Construction at 191st Street and Grassy Branch Road, Washington Township, Hamilton County, Indiana (Des. No. 1700731)

PROJECT OVERVIEW

Project Description:

The proposed project involves the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout in Hamilton County, Indiana. The project includes approach improvements, new sidewalk/multiuse path, new lighting, and drainage improvements. The roadway improvements extend along both 191st Street and Grassy Branch Road approaches approximately 500 feet in each direction from the intersection. Drainage improvements (storm sewer) will extend south of the intersection along Grassy Branch Road approximately 1,700 feet to Cool Creek (also referred to as Wheeler and Beals Legal Drain).

INDOT Designation Number/ Contract Number: Des. No. 1700731

Project Number:

DHPA Number:

Approved DHPA Plan Number:

Prepared For: DLZ Indiana, LLC

Contact Person: Jason Stone

Address: 2211 E. Jefferson Blvd.

City: South Bend

State: IN

ZIP Code: 46615-2692

Telephone Number: (574) 236-4400

Email Address: jstone@dlz.com

Principal Investigator: Jeffrey A. Plunkett

Signature: Jeffrey A. Plunkett

Digitally signed by Jeffrey A. Plunkett
DN: cn=Jeffrey A. Plunkett, o=NS Services, LLC, ou,
email=j.plunkett@nsemservices.com, c=US
Date: 2018.05.08 16:49:50 -0400

Company/Institution: NS Services, LLC

Address: 4974 S. Cobblestone Drive

City: Zionsville

State: IN

ZIP Code: 46077

Telephone Number: (317) 773-2774

Email Address: j.plunkett@nsemservices.com

grayish brown (10YR3/2) silt loam.

Comments: As discussed above, the northeast quadrant was all visually determined to have been previously disturbed by earth moving activities associated with construction of the church and retention pond as well as landscaping.

The previously undisturbed portions of the southeast quadrant and the storm sewer corridor to Cool Creek both had good ground surface visibility and, therefore, were examined by visual pedestrian transects.

RECOMMENDATION

- ☐ The archaeological records check has determined that the project area has the potential to contain archaeological resources and a Phase Ia archaeological reconnaissance is recommended.
- ☐ The archaeological records check has determined that the project area does not have the potential to contain archaeological resources and no further work is recommended before the project is allowed to proceed.
- ☒ The Phase Ia archaeological reconnaissance has located no archaeological sites within the project area and it is recommended that the project be allowed to proceed as planned.
- ☐ The Phase Ia archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits. It is recommended that Phase Ic archaeological subsurface reconnaissance be conducted before the project is allowed to proceed.
- ☐ The Phase Ia archaeological reconnaissance has determined that the project area is within 100 feet of a cemetery and a Cemetery Development Plan is required per IC-14-21-1-26.5.

Cemetery Name:

Other Recommendations/Commitments:

Pursuant to IC-14-21-1, if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646.

ATTACHMENTS

- ☒ Figure showing project location within Indiana.
- ☒ USGS topographic map showing the project area (*1:24,000 scale*).
- ☒ Aerial photograph showing the project area, land use, and survey methods.
- ☒ Photographs of the project area.
- ☐ Project plans (*if available*)

Other Attachments:

Bubb, Louis and Emily Culver
2014 Phase Ia Archaeological Field Reconnaissance: Additional Investigation for US 31 in Washington Township, Hamilton County, Indiana, Des. No. 1298684. Project# 106C-0122. 106 Consulting, Cincinnati, Ohio. Prepared for CHA Consulting, Indianapolis, Indiana.

Historic Landmarks Foundation of Indiana
1992 Hamilton County Interim Report, Indiana Historic Sites and Structures Inventory. Historic Landmarks Foundation of Indiana, Indianapolis.

SECTION 106 APPENDIX B

Consulting Party Correspondence



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix B



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 234-5168

Eric Holcomb, Governor
Joe McGuinness, Commissioner

June 4, 2018

This letter was sent to the listed parties.

Re: 191st Street/Grass Branch Road Intersection Improvements
Hamilton County, Indiana
Des. No. 1700731 DLZ No.:1763-1252-90

Dear Consulting Party,

Hamilton County, Indiana, with funding from the Federal Highway Administration and administrative oversight from the Indiana Department of Transportation (INDOT), proposes to proceed with a project involving 191st Street/Grass Branch Road Intersection Improvements (Des. No. 1700731). DLZ Indiana, LLC is under contract with Hamilton County to advance the environmental documentation for the referenced project.

This letter is part of the early coordination phase of the environmental review process requesting comments associated with this project. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above Des. Number and project description in your reply and your comments will be incorporated into the formal environmental study.

The proposed undertaking is the reconstruction of the intersection of 191st Street and Grassy Branch Road including approach and drainage improvements in Hamilton County, Indiana. It is within Washington Township, USGS Noblesville Topographic Quadrangle, in Sections 29 and 30, Township 19 North, Range 4 East.

The primary purpose and need for this project is to increase safety and mobility at this intersection. The proposed project will reconstruct the existing four-way stop intersection of 191st Street and Grassy Branch Road into a two-lane roundabout. The project will include approximately 500 feet of approach work in each direction. A 10' wide multiuse trail is included around the circulatory of the roundabout, within the limits of the curb ramps and splitter islands, on all the approaches. The multiuse path will also be included along the south side of 191st Street only, within the project limits. The project will also include ornamental lighting. Crosswalks and ADA compliant ramps will be included for each leg (at entry and exit locations). The project will include concrete curbs with an enclosed storm sewer network to provide drainage away from the pavement areas. Stormwater detention for this project will utilize the expansion of the existing drainage basin located in the northeast quadrant of the intersection and construction of a new linear underground piped detention system that will outlet into Cool Creek on the west side of Grassy Branch Road approximately 1,700 ft. south of the intersection. This piped detention system will be a part of the trunk storm sewer piping required to pick up the individual curb inlets, and will be oversized to store the required detention. It is anticipated that a minor amount of right-of-way will need to be acquired from the adjacent properties.

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic and archaeological properties. In accordance with 36 CFR 800.2 (c), you are hereby requested to be a consulting party to participate in the Section 106 process. Entities that have been invited to participate in the Section 106 consultation process for this project are identified in the attached list. Per 36 CFR 800.3(f), we hereby request that the Indiana State Historic Preservation Officer (SHPO) notify this office if the SHPO staff is aware of any other parties that may be entitled to be consulting parties or should be contacted as potential consulting parties for the project.

The Section 106 process involves efforts to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties. For more information regarding the protection of historic resources, please see the Advisory Council on Historic Preservation's guide: *Protecting Historic Properties: A Citizen's Guide to Section 106 Review* available online at <http://www.achp.gov/citizensguide.pdf>.

The Area of Potential Effects (APE) is the area in which the proposed project may cause alterations in the character or use of historic resources. The APE contains no resources listed in the National Register of Historic Places (NRHP). A historian who meets the Secretary of the Interior's Professional Qualification Standards identified and evaluated above-ground resources within the APE for potential eligibility for the NRHP. As a result of the historic property identification and evaluation efforts, no above-ground resources are recommended as eligible for listing in the NRHP.

With regards to archaeological resources, an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards conducted a Phase 1a archeological survey of the project area. As a result of these efforts, no NRHP-listed or NRHP-eligible archeological sites were identified and no further work is recommended.

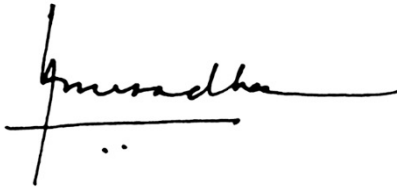
The Historic Property Report and/or Archaeology Report (Tribes only) are available for review in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE). You are invited to review these documents and respond with comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If you prefer a hard copy of this material, please respond to this email with your request within seven (7) days.

Please review the information and comment within thirty (30) calendar days of receipt. If you indicate that you do not desire to be a consulting party, or if you do not respond, you will not be included on the list of consulting parties for this project. If we do not receive your response in the time allotted, the project will proceed consistent with the proposed design and you will not receive further information about the project unless the design changes.

For questions concerning specific project details, you may contact Dan Stevens of DLZ by telephone (574-236-4400) or by email (dstevens@dlz.com). All future responses regarding the proposed project should be forwarded to DLZ at the following address: Dan Stevens, Environmental Scientist, DLZ Indiana, LLC, 2211 East Jefferson Boulevard, South Bend, Indiana 46615 (dstevens@dlz.com).

Tribal contacts may contact Shaun Miller at smiller@indot.in.gov or 317-233-6795 or Michelle Allen at FHWA at michelle.allen@dot.gov or 317-226-7344.

Sincerely,

A handwritten signature in black ink, appearing to read "Anuradha", written over a horizontal line.

Anuradha V. Kumar, Manager
Cultural Resources Office
Environmental Services

Enclosures:

- Figure 1 - Location Map**
- Figure 2 -Topographic Map**
- Figure 3 -Aerial Photograph**
- Figure 4 -Site Photographs**

In addition to the SHPO, this consultation request is being sent to the following agencies/parties:

Hamilton County Board of Commissioners
1 Hamilton County Square
Suite 157
Noblesville, IN 46060
dan.stevens@hamiltoncounty.in.gov

Indiana Landmarks Center
1201 Central Avenue
Indianapolis, IN 46202-3204
central@indianalandmarks.org

Hamilton County Historical Society/Hamilton County
Museum of History
Diane Nevitt, Director
P. O. Box 397
Noblesville, IN 46061
hamiltoncomuseum@att.net

Hamilton County Historian
David Heighway
140 N. 15th St.
Noblesville, IN 46060-2610
heighwayd@earthlink.net

Hamilton County Genealogy Society
111 Beechmont Drive
Carmel, IN 46032
Kathyvena@att.net
Contact: Kathy A. Venable, President

Westfield-Washington Historical Society
Steve Osborne, President
P. O. Box 103
Westfield, IN 46074
Phone: 317-896-1943
sosborne@wwhs.us

Chris Burt
Hamilton County Highway Engineer
1700 S 10th Street
Noblesville, IN 46060

Indianapolis Metropolitan Planning Organization
200 E. Washington St.
Suite 1922, City/County Bldg.
Indianapolis, IN 46204
James.rinehart@indympo.org

Delaware Tribe of Oklahoma

Delaware Tribe of Indians, Oklahoma

Eastern Shawnee Tribe of Oklahoma

Miami Tribe of Oklahoma

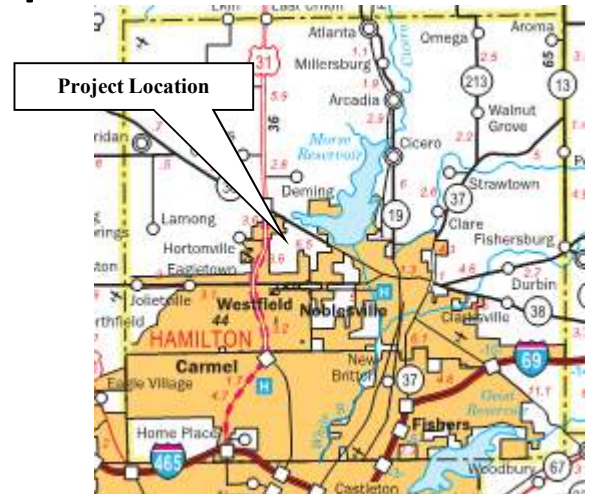
Peoria Tribe of Indians Oklahoma

Pokagon Band of Potawatomi Indians

Hamilton County



Location Map



<http://maps.indiana.edu/>

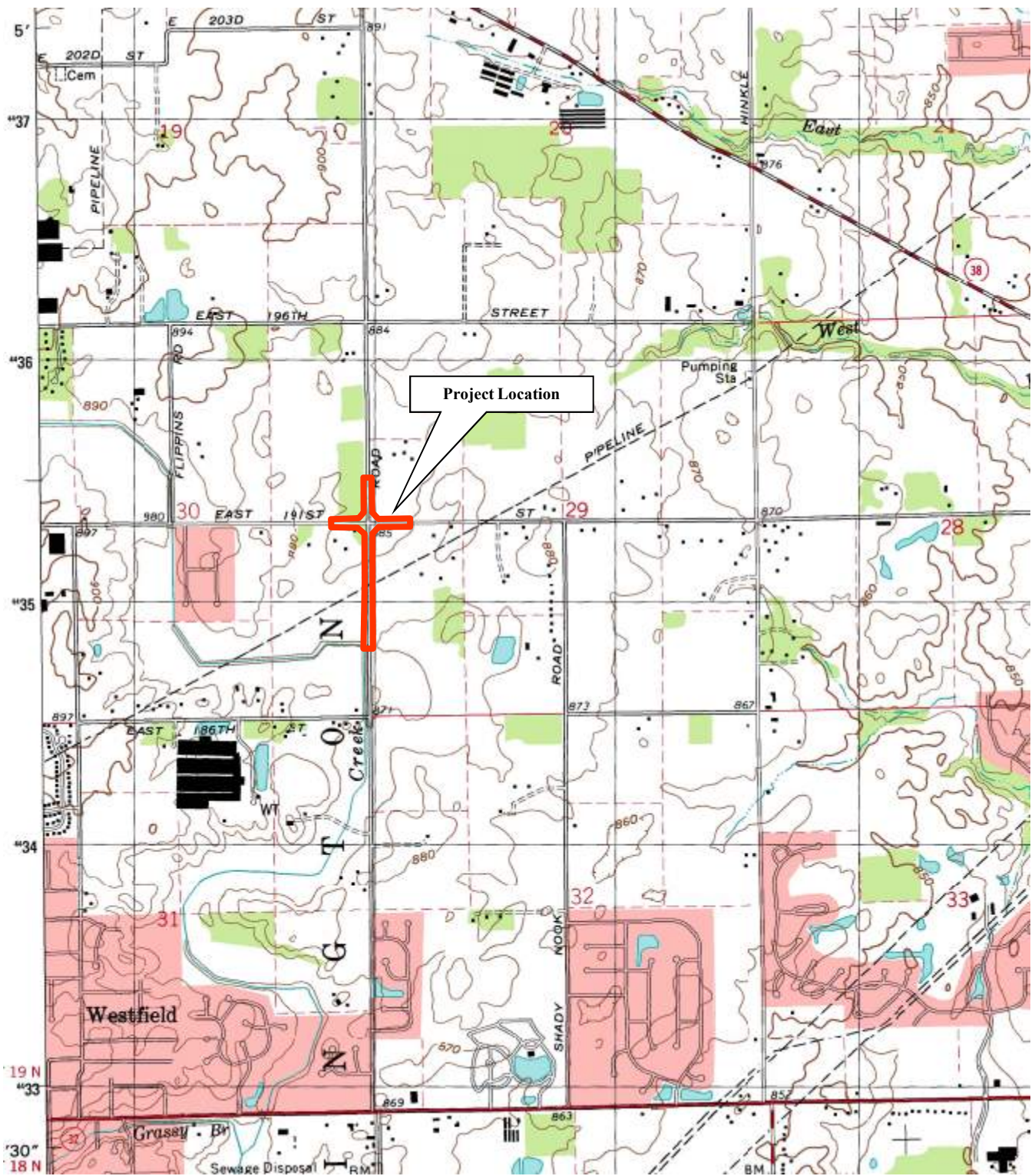


191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Scale: NTS

Figure: 1

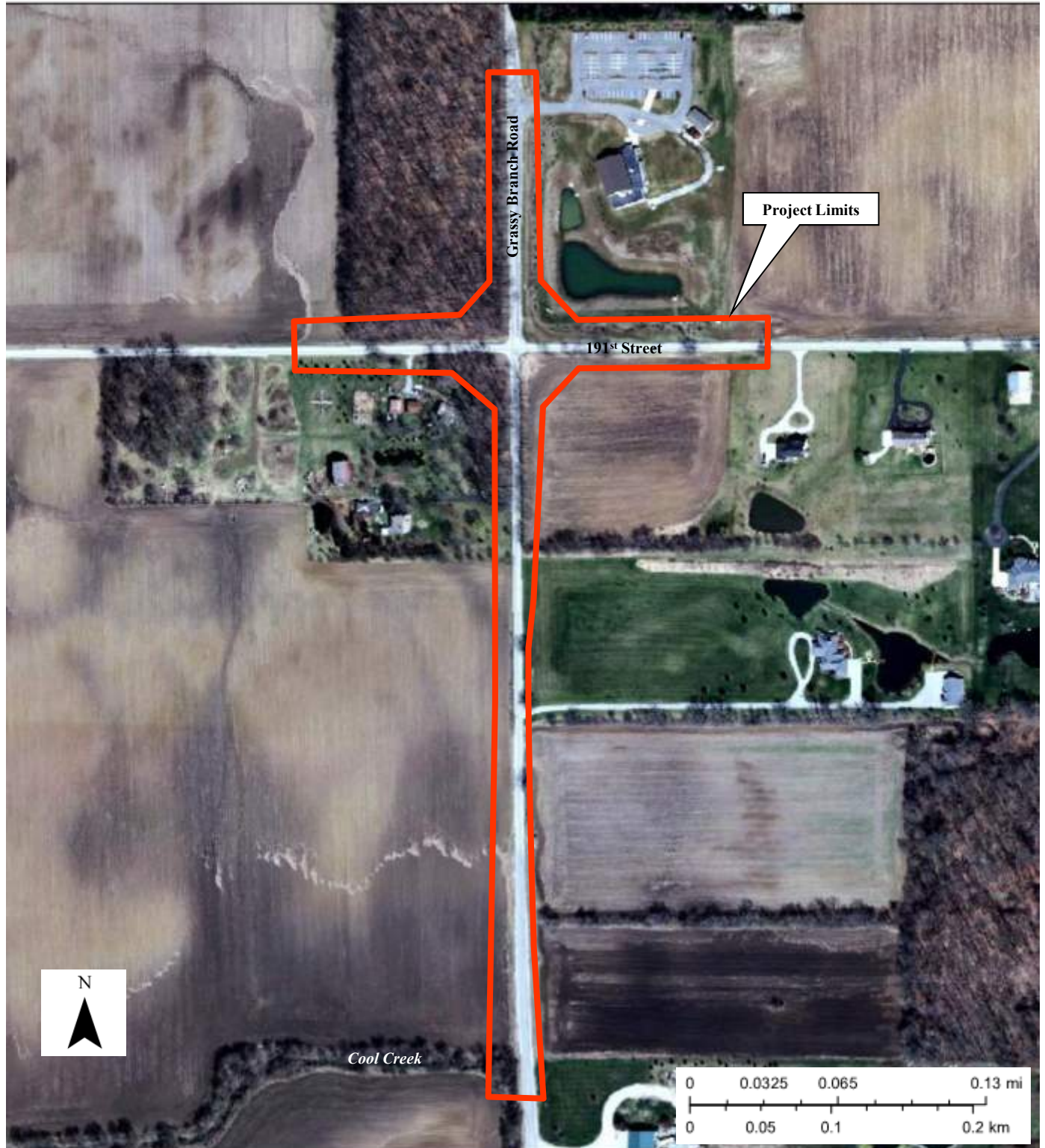
USGS Quadrangle Map



USGS Noblesville Quadrangle Map

	191st Street/Grassy Branch Road Intersection Improvements Des. No.: 1700731 Hamilton County, Indiana	Scale: 1"=2000'
		Figure: 2

Aerial



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Scale: See Map

Figure: 3



1) Looking north along Grassy Branch Road from 191st Street



2) Looking east along 191st Street from Grassy Branch Road



3) Looking south along Grassy Branch Road from 191st Street




4) Looking west along 191st Street from Grassy Branch Road



5) Looking south along Grassy Branch Road toward Cool Creek
(also referred to as Wheeler and Beals Legal Drain)



6) Looking north at the pond feature in northeast quadrant of the intersection

	<p>191st Street/Grassy Branch Road Intersection Improvements Des. No.: 1700731 Hamilton County, Indiana</p>	<p>Photographs</p>
		<p>Figure 4</p>

Daniel Stevens

From: Daniel Stevens
Sent: Monday, June 04, 2018 4:10 PM
To: dan.stevens@hamiltoncounty.in.gov; central@indianalandmarks.org; hamiltoncomuseum@att.net; heighwayd@earthlink.net; Kathyvena@att.net; sosborne@wwhs.us; James.rinehart@indympo.org; county.highway@hamiltoncounty.in.gov
Cc: Carpenter, Patrick A; Miller, Shaun; michelle.allen@dot.gov; Laswell, Jeffrey; Jason Stone
Subject: FHWA Project: Des. No. 1700731; 191st Street/Grassy Branch Road Intersection Improvements, Hamilton County, Indiana

Subject of email: FHWA Project: Des. No. 1700731; 191st Street/Grassy Branch Road Intersection Improvements, Hamilton County, Indiana

Des. No.: 1700731

Project Description:

The proposed project involves the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout in Hamilton County, Indiana. The project includes approach improvements, new sidewalk/multiuse path, new lighting, and drainage improvements.

Location:

The project is located within Washington Township, USGS Noblesville Topographic Quadrangle, in Sections 29 and 30, Township 19 North, Range 4 East, Hamilton County, Indiana.

Hamilton County, with funding from the Federal Highway Administration and administrative oversight from the Indiana Department of Transportation, proposes to proceed with the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout (Des. No. 1700731).

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. The following agencies/individuals are being invited to become consulting parties:

- Hamilton County Board of Commissioners
- Indiana Landmarks Center
- Hamilton County Historical Society/Hamilton County Museum of History
- Hamilton County Historian
- Hamilton County Genealogy Society
- Westfield-Washington Historical Society
- Indianapolis Metropolitan Planning Organization
- Hamilton County Highway Engineer
- Delaware Tribe of Oklahoma
- Delaware Tribe of Indians, Oklahoma
- Eastern Shawnee Tribe of Oklahoma
- Miami Tribe of Oklahoma
- Peoria Tribe of Indians, Oklahoma
- Pokagon Band of Potawatomi Indians

This letter is part of the early coordination phase of the environmental review process requesting comments associated with this project. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above Des. Number and project description in your reply and your comments will be incorporated into the formal environmental study.

Please review the letter [and any other document(s) currently available: HPR, archaeology report, etc.] located in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with your comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. If we do not receive a response from an invited consulting party in the time allotted, the project will proceed consistent with the proposed design. **Therefore, if we do not receive a response within thirty (30) days, your agency or organization will not receive any further information on the project unless the scope of work changes.**

Tribal contacts may contact Shaun Miller at smiller@indot.in.gov or 317-233-6795 or Michelle Allen at FHWA at michelle.allen@dot.gov or 317-226-7344.
Thank you in advance for your input,

Daniel Stevens | Environmental Scientist

574-236-4400 x614 (office) | 574-236-4471 (fax) | 574-514-8266 (cell)
dstevens@dlz.com | www.dlz.com



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Daniel Stevens

From: Carpenter, Patrick A <PACarpenter@indot.IN.gov>
Sent: Thursday, June 07, 2018 11:44 AM
To: bbarnes@estoo.net; Diane Hunter; Logan Pappenfort; jason.wesaw@pokagonband-nsn.gov; Kimberly Penrod; Larry Heady
Cc: Daniel Stevens; Laswell, Jeffrey; Miller, Shaun (INDOT); Michelle Allen (michelle.allen@dot.gov); Branigin, Susan
Subject: FHWA Project: Des. No. 1700731; 191st Street/Grassy Branch Road Intersection Improvements, Hamilton County, Indiana

Dear Consulting Parties,

Subject of email: FHWA Project: Des. No. 1700731; 191st Street/Grassy Branch Road Intersection Improvements, Hamilton County, Indiana

Des. No.: 1700731

Project Description: The proposed project involves the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout in Hamilton County, Indiana. The project includes approach improvements, new sidewalk/multiuse path, new lighting, and drainage improvements.

Location: The project is located within Washington Township, USGS Noblesville Topographic Quadrangle, in Sections 29 and 30, Township 19 North, Range 4 East, Hamilton County, Indiana.

Hamilton County, with funding from the Federal Highway Administration and administrative oversight from the Indiana Department of Transportation, proposes to proceed with the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout (Des. No. 1700731).

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties. The following agencies/individuals are being invited to become consulting parties:

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- Hamilton County Historical Society/Hamilton County Museum of History
- Hamilton County Historian
- Hamilton County Genealogy Society
- Westfield-Washington Historical Society
- Indianapolis Metropolitan Planning Organization
- Hamilton County Highway Engineer
- Delaware Tribe of Oklahoma
- Delaware Tribe of Indians, Oklahoma
- Eastern Shawnee Tribe of Oklahoma
- Miami Tribe of Oklahoma
- Peoria Tribe of Indians, Oklahoma
- Pokagon Band of Potawatomi Indians

This letter is part of the early coordination phase of the environmental review process requesting comments associated with this project. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above Des. Number and project description in your reply and your comments will be incorporated into the formal environmental study.

Please review the letter [and any other document(s) currently available: HPR, archaeology report, etc.] located in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. is the most efficient search term, once in IN SCOPE), and respond with your comments on any historic resource impacts incurred as a result of this project so that an environmental report can be completed. We also welcome your related opinions and other input to be considered in the preparation of the environmental document. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. If we do not receive a response from an invited consulting party in the time allotted, the project will proceed consistent with the proposed design. **Therefore, if we do not receive a response within thirty (30) days, your agency or organization will not receive any further information on the project unless the scope of work changes.**

Tribal contacts may contact Shaun Miller at smiller@indot.in.gov or 317-233-6795 or Michelle Allen at FHWA at michelle.allen@dot.gov or 317-226-7344.

Thank you in advance for your input,

Regards,

Patrick Carpenter
Section 106 Specialist, Cultural Resources Office
Environmental Services
Indiana Department of Transportation
100 N Senate Ave., IGCN-Rm. N-642
Indianapolis, IN 46204-2216
317-233-2061

Daniel Stevens

From: Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Sent: Wednesday, June 13, 2018 8:57 AM
To: Daniel Stevens
Cc: Carpenter, Patrick A
Subject: FW: Des. No. 1700731 191st Street/Grassy Branch Road Intersection Improvements, Hamilton County, Indiana Comments of the Miami Tribe of Oklahoma
Attachments: Des. No. 1700731 191st Street_Grassy Branch Road Intersection Improvements, Hamilton County, Indiana Comments of the Miami Tribe of Oklahoma.pdf

Dan,

Please find attached a response letter from the Miami Tribe accepting consulting party status.

Thank you,

Shaun Miller
Archaeological Team Lead
INDOT, Cultural Resources Office
smiller@indot.in.gov
(317) 233-6795

From: Diane Hunter [<mailto:dhunter@miamination.com>]
Sent: Tuesday, June 12, 2018 10:08 AM
To: Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Subject: Des. No. 1700731 191st Street/Grassy Branch Road Intersection Improvements, Hamilton County, Indiana Comments of the Miami Tribe of Oklahoma

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Dear Mr. Miller:
Attached you will find the response of the Miami Tribe of Oklahoma to the above-mentioned project.

Diane Hunter
Tribal Historic Preservation Officer
Miami Tribe of Oklahoma
dhunter@miamination.com
918-541-8966



Miami Tribe of Oklahoma

3410 P St. NW, Miami, OK 74354 • P.O. Box 1326, Miami, OK 74355
Ph: (918) 541-1300 • Fax: (918) 542-7260
www.miamination.com



June 12, 2018

Shaun Miller
Archaeological Team Lead
Cultural Resources Office
Indiana DOT
575 North Pennsylvania Street
Indianapolis, IN 46204

Re: Des. No. 1700731 191st Street/Grassy Branch Road Intersection Improvements, Hamilton County, Indiana – Comments of the Miami Tribe of Oklahoma

Dear Mr. Miller:

Aya, kikwehsitoole – I show you respect. My name is Diane Hunter, and I am the Tribal Historic Preservation Officer for the Federally Recognized Miami Tribe of Oklahoma. In this capacity, I am the Miami Tribe's point of contact for all Section 106 issues.

The Miami Tribe offers no objection to the above-mentioned project at this time, as we are not currently aware of existing documentation directly linking a specific Miami cultural or historic site to the project site. However, as this site is within the aboriginal homelands of the Miami Tribe, if any human remains or Native American cultural items falling under the Native American Graves Protection and Repatriation Act (NAGPRA) or archaeological evidence is discovered during any phase of this project, the Miami Tribe requests immediate consultation with the entity of jurisdiction for the location of discovery. In such a case, please contact me at 918-541-8966 or by email at dhunter@miamination.com to initiate consultation.

The Miami Tribe accepts the invitation to serve as a consulting party to the proposed project. In my capacity as Tribal Historic Preservation Officer I am the point of contact for consultation.

Respectfully,

Diane Hunter

Diane Hunter
Tribal Historic Preservation Officer



June 29, 2018

Daniel Stevens, Environmental Scientist
DLZ
dstevens@DLZ.com

Re: FHWA Project: Des. No. 1700731; 191st Street/Grassy Branch Road Intersection Improvements,
Hamilton County, Indiana

Mr. Stevens:

Thank you for the opportunity to comment on the above undertaking. In light of the Historic Property Report (HPR), we concur with the selected boundaries for the project's Area of Potential Effects (APE). In addition, we do not object to the historian's findings that there are currently no resources listed in or eligible for listing in the National Register of Historic Places (NRHP) within the APE. However, if at a future date the pre-1860 I-House typology were to become more scarce in Hamilton County and Washington Township, we believe that the resource would have potential become NRHP-eligible.

Sincerely,

Sam Burgess
Community Preservation Specialist



Division of Historic Preservation & Archaeology 402 W. Washington Street, W274 Indianapolis, IN 46204-2739
Phone 317-232-1646 Fax 317-232-0693 dhpa@dnr.IN.gov



July 9, 2018

Dan Stevens
Environmental Scientist
DLZ Indiana, L.L.C.
2211 East Jefferson Boulevard
South Bend, Indiana 46615

State Agency: Indiana Department of Transportation ("INDOT").
on behalf of Federal Highway Administration, Indiana Division ("FHWA")

Re: Early Coordination letter, historic property report (Hudziak, 12/24/2017), and Indiana archaeological short report (Bennett and Plunkett, 05/08/2018), for 191st Street/Grass Branch Road Intersection Improvements in Washington Township, Hamilton County (Des. No. 1700731, DHPA No. 22634)

Dear Mr. Stevens:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. §306108), 36 C.F.R. Part 800, and the "Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana," the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO staff" or "INDNR-DHPA") has reviewed INDOT's June 4, 2018, early coordination letter, the historic property report ("HPR"; Hudziak, 12/24/2017), and the Indiana archaeological short report (Bennett and Plunkett, 05/08/2018), for this project, all of which we received on June 8, 2018.

We are not aware of any parties who should be invited to participate in the Section 106 consultation for this federal undertaking, beyond those whom INDOT has invited.

The area of potential effects ("APE") proposed in the HPR appears to be of appropriate size for a project of this nature to encompass the geographic area in which direct or indirect effects could occur. The APE is characterized by agricultural fields and wooded areas mixed with light residential development near the crossroads of 191st Street and Grass Branch Road in Washington Township, Hamilton County, Indiana.

For the purposes of the Section 106 review of this federal undertaking, we agree with the conclusions in the HPR regarding the ineligibility of the resources surveyed for inclusion in the National Register of Historic Places ("NRHP"). However, if another consulting party disagrees with any of the conclusions of the HPR, then further consultation would be necessary.

Additionally, in regard to archaeological resources, based on the submitted information and the documentation available to the staff of the Indiana SHPO, we have not identified any currently known archaeological resources listed in or eligible for inclusion in the National Register of Historic Places ("NRHP") within the portions of the proposed project area that were subjected to archaeological field reconnaissance survey; and we concur with the opinion of the archaeologist, as expressed in the Indiana archaeological short report (Bennett and Plunkett, 05/08/2018), that no further archaeological investigations appear necessary at the portions of the proposed project area that were subjected to archaeological reconnaissance survey.

Furthermore, based on the submitted information and the documentation available to the staff of the Indiana SHPO, we concur that no further archaeological investigations appear necessary at the portions of the proposed project area that were not subjected to archaeological field reconnaissance survey. However, this identification is subject to the ground-disturbing project-related activities remaining within areas disturbed by previous construction of a recent and non-historical nature. If archaeological deposits are encountered from the post-contact period, they will be evaluated regarding their eligibility for the NRHP in consultation with the staff of the Indiana SHPO. Please contact our office if such deposits are encountered. The archaeological recording must be done in accordance with the Secretary of the Interior's "Standards and Guidelines for Archaeology and Historic Preservation" (48 F.R. 44716) and a report of the archaeological documentation must be submitted to our office for review and comment.

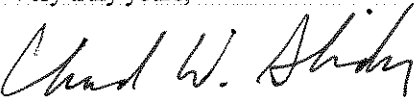
If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to the Indiana Department of Natural Resources ("IDNR") within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and -29 does not obviate the need to adhere to applicable federal statutes and regulations, including but not limited to 36 C.F.R. Part 800.

Unless another consulting party has raised an issue about a possible historic property within the APE, it might now be appropriate to ask INDOT's Cultural Resources Office for a finding.

The structures reviewer for the Indiana SHPO staff on this project is Danielle Kauffmann, and the archaeological reviewer is Wade T. Tharp. However, if you have questions about the status of our review of a submission, about the kind of information to submit, or about a procedural issue, please contact initially an INDOT Cultural Resources Office staff member who is assigned to the project.

In all future correspondence regarding the 191st Street/Grass Branch Road Intersection Improvements in Washington Township, Hamilton County, Indiana (Des. No. 1700731), please refer to DHPA No. 22634.

Very truly yours,



Christopher A. Smith
Deputy Director
Indiana Department of Natural Resources

CAS:DMK:WTT:wtt

emc: Robert Dirks, P.E., Federal Highway Administration
Michelle Allen, Federal Highway Administration
Anuradha Kumar, Indiana Department of Transportation
Mary Kennedy, Indiana Department of Transportation
Susan Branigin, Indiana Department of Transportation
Shaun Miller, Indiana Department of Transportation
Shirley Clark, Indiana Department of Transportation
Dan Stevens, DLZ Indiana, L.L.C.
Danielle Kauffmann, Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology
Wade T. Tharp, Indiana Department of Natural Resources, Division of Historic Preservation and Archaeology

The Indianapolis Star

130 South Meridian Street
Indianapolis, IN 46225
Marion County, Indiana

Federal Id: 06-1032273

DLZ INDIANA LLC

Account #:INI-32039
Order #:0003368882
of Affidavits:1
Total Amount of Claim:\$94.41

DLZ INDIANA LLC
ATTN Dan Stevens
2211 E JEFFERSON BLVD
SOUTH BEND, IN 46615

PUBLISHER'S AFFIDAVIT

**STATE OF WISCONSIN,
County Of Brown**

} **SS:**

Personally appeared before me, a notary public in and for said county and state, the undersigned

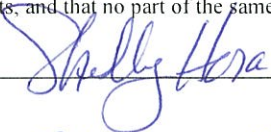
I, being duly sworn, say that I am a clerk for THE INDIANAPOLIS NEWSPAPERS a DAILY STAR newspaper of general circulation printed and published in the English language in the city of INDIANAPOLIS in state and county of Marion, and that the printed matter attached hereto is a true copy, which was duly published in said paper for 1 times., the dates of publication being as follows:

The insertion being on the 02/02/2019

Newspaper has a website and this public notice was posted in the same day as it was published in the newspaper.

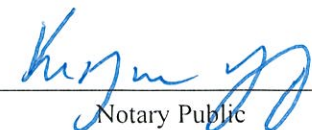
Pursuant to the provisions and penalties of Ch. 155, Acts 1953,

I hereby certify that the foregoing account is just and correct, that the amount claimed is legally due, after allowing all just credits, and that no part of the same has been paid.



Date: 3-12, 2019 Title: Clerk

Subscribed and sworn to before me this 12 day of March, 2019



Notary Public

Notary Expires:

11/9/22



(Governmental Unit)

To: INDIANAPOLIS STAR

County, Indiana

Indianapolis, IN**PUBLISHER'S CLAIM**

79 lines, 2 columns wide equals 158 equivalent
lines at \$0.60 per line @ 1 days, \$94.41

Website Publication \$0

Acct #:INI-32039

Ad #: 0003368882

Charge for proof(s) of publication \$0.00

DATA FOR COMPUTING COST

Width of single column 9.5 ems

Number of insertions 1Size of type 7 point

TOTAL AMOUNT OF CLAIM

\$94.41

Claim No. _____ Warrant No. _____

IN FAVOR OF

The Indianapolis Star

Indianapolis, IN

Marion County

130 S. Meridian St. Indianapolis, IN 46225

I have examined the within claim and hereby certify
as follows:

That it is in proper form.

This it is duly authenticated as required by law.

That it is based upon statutory authority.

That it is apparently (correct)
(incorrect)

\$ _____
On Account of Appropriation For

FED. ID

#06-1032273

Allowed _____, 20____

In the sum of \$ _____

I certify that the within claim is true and correct; that the services
there-in itemized and for which charge is made were ordered by me
and were necessary to the public business.

**Public Notice
Des. No. 1700731**

Hamilton County, Indiana is planning to undertake an intersection improvement project funded in part by the Federal Highway Administration (FHWA). The project is located at the 191st Street and Grassy Branch Road Intersection.

Under the preferred alternative, the proposed project would involve replacing the existing four-way stop intersection with a two-lane roundabout and will reconstruct the roadway approaches within approximately 500 feet of the intersection. A 10' wide multiuse trail is included around the circulatory of the roundabout, within the limits of the curb ramps and splitter islands, on all the approaches. The multiuse path will also be included along the south side of 191st Street only, within the project limits. Stormwater detention for this project will utilize the expansion of the existing drainage basin located in the northeast quadrant of the intersection and construction of a new linear underground piped detention system that will outlet into Cool Creek on the west side of Grassy Branch Road approximately 1,700 ft. south of the intersection. Acquisition of land for new permanent right of way, as well as temporary right of way associated with grading and driveway reconstruction, is anticipated throughout the project limits. An approximate 5 acres of permanent and 0.1 acres of temporary right of way will be acquired for the project. Access to all properties will be maintained during construction. It is anticipated that the intersection will be closed during construction.

The proposed action does not impact properties listed on or eligible for the National Register of Historic Places. The Indiana Department of Transportation (INDOT), on behalf of the FHWA, has issued a "No Historic Properties Affected" finding for the project due to the fact that no historic properties are present within the Area of Potential Effects (APE). In accordance with the National Historic Preservation Act, the views of the public are being sought regarding the effect of the proposed project on the historic elements as per 36 CFR 800.2(d), 800.3(e) and 800.6(a)(4). Pursuant to 36 CFR 800.4(d)(1), the documentation specified in 36 CFR 800.11(d) is available for inspection in DLZ Indiana, LLC's office located at 157 E. Maryland Street Indianapolis, Indiana. Additionally, this documentation can be viewed electronically by accessing INDOT's Section 106 document posting website IN SCOPE at <http://erms.indot.in.gov/Section106Documents>. This documentation serves as the basis for the "No Historic Properties Affected" finding. The views of the public on this effect finding are being sought. Please reply with any comments to Daniel J. Stevens, DLZ Indiana, LLC, 2211 E. Jefferson Boulevard, South Bend, IN 46615, Phone: 574-236-4400, Email: dstevens@dlz.com no later than March 8, 2019.

In accordance with the "Americans with Disabilities Act", if you have a disability for which Hamilton County needs to provide accessibility to the document(s) such as interpreters or readers, please contact David Lucas, Project Coordinator, Hamilton County Highway Department, Phone: 317-773-7770, or Email: david.lucas@hamiltoncounty.in.gov.

(S - 2/2/19 - 0003368882)

hspaxlp



Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739
Phone 317-232-1646 • Fax 317-232-0693 • dhpa@dnr.IN.gov • www.IN.gov/dnr/historic



March 4, 2019

Anuradha V. Kumar
Cultural Resources Office
Environmental Services
Indiana Department of Transportation
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204

Federal Agency: Indiana Department of Transportation ("INDOT"),
on behalf of Federal Highway Administration, Indiana Division ("FHWA")

Re: INDOT's finding of "no historic properties affected," on behalf of the FHWA, with supporting
documentation, for 191st Street/Grass Branch Road Intersection Improvements in Washington
Township, Hamilton County, Indiana (Des. No. 1700731; DHPA No. 22634)

Dear Ms. Kumar:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. §306108), 36 C.F.R. Part 800, and the "Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana," the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO" or "INDNR-DHPA") has reviewed INDOT's January 31, 2019, letter and January 28, 2019, finding, on behalf of FHWA, all of which we received on February 5, 2019, for the aforementioned project.

As previously stated, in regard to archaeological resources, based on the submitted information and the documentation available to the staff of the Indiana SHPO, we have not identified any currently known archaeological resources listed in or eligible for inclusion in the National Register of Historic Places ("NRHP") within the portions of the proposed project area that were subjected to archaeological field reconnaissance survey; and we concur with the opinion of the archaeologist, as expressed in the Indiana archaeological short report (Bennett and Plunkett, 05/08/2018), that no further archaeological investigations appear necessary at the portions of the proposed project area that were subjected to archaeological reconnaissance survey.

Additionally, based on the submitted information and the documentation available to the staff of the Indiana SHPO, we concur that no further archaeological investigations appear necessary at the portions of the proposed project area that were not subjected to archaeological field reconnaissance survey. However, this identification is subject to the ground-disturbing project-related activities remaining within areas disturbed by previous construction of a recent and non-historical nature. If archaeological deposits are encountered from the post-contact period, they will be evaluated regarding their eligibility for the NRHP in consultation with the staff of the Indiana SHPO. Please contact our office if such deposits are encountered. The archaeological recording must be done in accordance with the Secretary of the Interior's "Standards and Guidelines for Archaeology and Historic Preservation" (48 F.R. 44716) and a report of the archaeological documentation must be submitted to our office for review and comment.

If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to INDNR-DHPA within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and -29 does not obviate the need to adhere to applicable federal statutes and regulations, including but not limited to 36 C.F.R. Part 800.

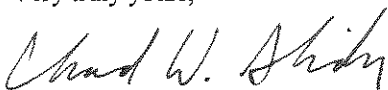
Additionally, we agree that there are no above-ground resources listed or eligible for listing in the NRHP within the area of potential effects.

Accordingly, we concur with INDOT's January 28, 2019, Section 106 finding, on behalf of FHWA, of "No Historic Properties Affected" for this federal undertaking.

The reviewers of this project on the Indiana SHPO staff are Wade T. Tharp for archaeology and Danielle Kauffmann for structures. However, if you have questions about the status of a review, about the review process, or about the information to submit for review, please contact first one of the assigned reviewers at INDOT's Cultural Resources Office.

In any future correspondence regarding the 191st Street/Grass Branch Road Intersection Improvements project in Washington Township, Hamilton County, Indiana (Des. No. 1700731), please refer to DHPA No. 22634.

Very truly yours,



Beth K. McCord
Deputy State Historic Preservation Officer

BKM:DMK:WTT:wt

emc: Robert Dirks, P.E., FHWA
Anuradha Kumar, INDOT
Susan Branigin, INDOT
Shaun Miller, INDOT
Shirley Clark, INDOT
Dan Stevens, DLZ Indiana, LLC
Wade T. Tharp, INDNR-DHPA
Danielle Kauffmann, INDNR-DHPA



INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 234-5168

Eric Holcomb, Governor
Joe McGuinness, Commissioner

September 17, 2019

Mr. Cameron F. Clark, Indiana SHPO
IDNR- DHPA
402 W. Washington Street, W 274
Indianapolis, IN 46204-2739

Note: Project plans have been removed from this appendix. Similar graphics are presented in Appendix B of this Categorical Exclusion document. The archaeological report is not a public document and has been removed from this appendix.

Re: Addendum Archaeological Report
191st Street/Grass Branch Road Intersection Improvements
Hamilton County, Indiana
Des. No. 1700731, DLZ No.:1763-1252-90, DHPA No.: 22634

Dear Consulting Party,

INDOT, on behalf of FHWA, signed a determination of "No Historic Properties Affected" for this Section 106 undertaking on January 28, 2019. After the Section 106 process was completed, it was determined that minor project modifications are required. The current project plans are attached. The Area of Potential Effects (APE) for above-ground resources is sufficient to account for the additional effects of the proposed changes and therefore is not recommended to increase. However, project activities now extend beyond the limits of the original archaeological investigation. The attached Addendum to the Phase 1a Archaeological Field Reconnaissance (NS Services, LLC) was prepared for the additional right-of-way required for the project.

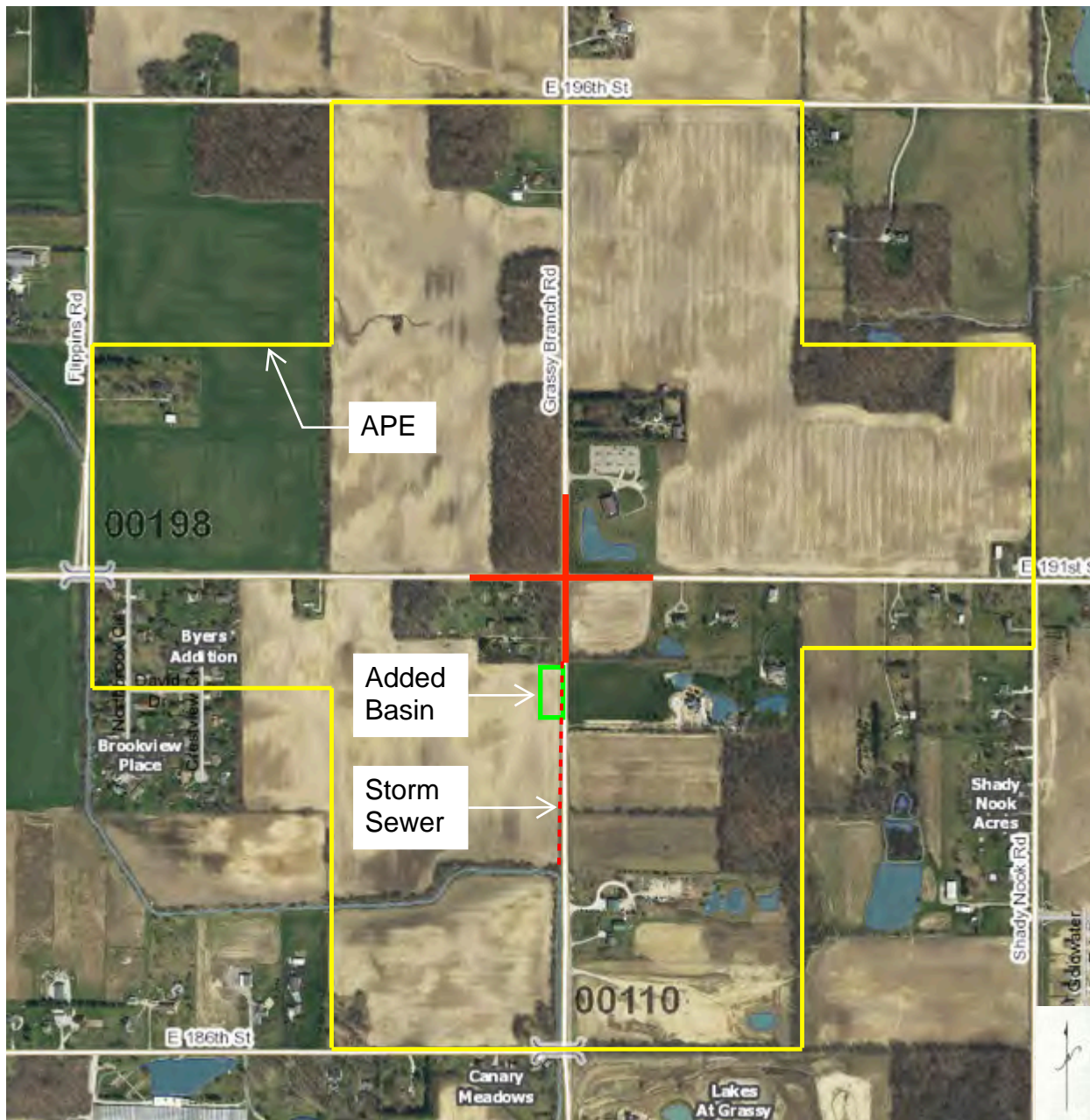
The project modifications include the addition of a stormwater basin along the west side of Grassy Branch Road south of the intersection (see pages 6-7 in attached plans). An aerial photograph depicting the APE and the added basin is also attached. During this process, the limits of the previous archaeological report were evaluated and expanded as needed to match the proposed right-of-way limits along each approach.

Since the finding was "No Historic Properties Affected" and the proposed detention pond and outlet will be constructed within the original APE, we believe the original finding is still correct. You are being provided thirty (30) calendar days from receipt of this information to review and provide comment.

Sincerely,

Anuradha V. Kumar, Manager
Cultural Resources Office
Environmental Services

Approved APE with Added Basin



Aerial map with the APE boundary in yellow and project limits in red

(Scale: 1 inch = 900 feet)

2016 Aerial images courtesy of Hamilton Co Flex Viewer:

<http://gis.hamiltoncounty.in.gov/FlexViewer/Index.html>

Exhibit 1

Daniel Stevens

From: Korzeniewski, Patricia J <PKorzeniewski@indot.IN.gov>
Sent: Tuesday, September 17, 2019 2:45 PM
To: michelle.allen@dot.gov; thpo@estoo.net; dhunter@miamination.com; lpappenfort@peoriatribes.com; Matthew.Bussler@pokagonband-nsn.gov; dkelly@delawarennation-nsn.gov; ethompson@delawarennation-nsn.gov; lheady@delawaretribes.org
Cc: Korzeniewski, Patricia J; Daniel Stevens; Carpenter, Patrick A; Miller, Shaun (INDOT); j.plunkett@nsenvservices.com
Subject: Des. No.: 1700731, 191st Street/Grassy Branch Road, Hamilton County, Indiana
Attachments: 191standGrassyBranchRd_Des1700731_Phase1ATransLtr_2019-9-17.pdf

EXTERNAL: Message origin is from an external network. Use proper judgment and caution when opening attachments, clicking links, or responding to this email.

Des. No.: 1700731
Project Description: 191st Street/Grassy Branch Road
Location: Hamilton County, Indiana

Dear Consulting Parties,

INDOT, on behalf of FHWA, signed a determination of “No Historic Properties Affected” for this Section 106 undertaking on January 28, 2019. After the Section 106 process was completed, it was determined that minor project modifications are required. The current project plans are attached. The Area of Potential Effects (APE) for above-ground resources is sufficient to account for the additional effects of the proposed changes and therefore is not recommended to increase. However, project activities now extend beyond the limits of the original archaeological investigation. An Addendum to the Phase 1a Archaeological Field Reconnaissance (NS Services, LLC) was prepared for the additional right-of-way required for the project.

As part of Section 106 of the National Historic Preservation Act, an addendum Phase 1a archaeology report has been prepared and is ready for review and comment by consulting parties. Please review this documentation located in IN SCOPE at <http://erms.indot.in.gov/Section106Documents/> (the Des. No. 1700731 is the most efficient search term, once in IN SCOPE), and respond with any comments that you may have. If a hard copy of the materials is needed, please respond to this email with your request within seven (7) days.

Consulting parties have thirty (30) calendar days from receipt of this information to review and provide comment. Tribal contacts may contact Shaun Miller at smiller@indot.in.gov or 317-233-6795 or Michelle Allen at FHWA at michelle.allen@dot.gov or 317-226-7344.

Patricia Jo Korzeniewski
Archaeologist and Environmental Manager
INDOT, Cultural Resources Office
PKorzeniewski@indot.in.gov
(317) 233-2093



Division of Historic Preservation & Archaeology · 402 W. Washington Street, W274 · Indianapolis, IN 46204-2739
Phone 317-232-1646 · Fax 317-232-0693 · dhpa@dnr.IN.gov · www.IN.gov/dnr/historic



October 23, 2019

Anuradha V. Kumar
Cultural Resources Office
Environmental Services
Indiana Department of Transportation
100 North Senate Avenue, Room N642
Indianapolis, Indiana 46204

Federal Agency: Indiana Department of Transportation ("INDOT"),
on behalf of Federal Highway Administration, Indiana Division ("FHWA")

Re: Updated project information, and addendum Indiana archaeological short report
(Bennett/Plunkett 09/09/2019), for 191st Street/Grass Branch Road Intersection Improvements in
Washington Township, Hamilton County, Indiana (Des. No. 1700731; DHPA No. 22634)

Dear Ms. Kumar:

Pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. §306108), 36 C.F.R. Part 800, and the "Programmatic Agreement (PA) Among the Federal Highway Administration, the Indiana Department of Transportation, the Advisory Council on Historic Preservation and the Indiana State Historic Preservation Officer Regarding the Implementation of the Federal Aid Highway Program In the State of Indiana," the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO" or "INDNR-DHPA") has reviewed INDOT's September 17, 2019, letter, with enclosures, all of which we received September 23, 2019, for the aforementioned project.

In regards to buildings and structures, we agree that the project modifications will not expand the area of potential effects and will not require additional survey.

In regard to archaeological resources, based on the submitted information and the documentation available to the staff of the Indiana SHPO, we have not identified any currently known archaeological resources listed in or eligible for inclusion in the National Register of Historic Places ("NRHP") within the additional portions of the proposed project area that were subjected to archaeological field reconnaissance survey; and we concur with the opinion of the archaeologist, as expressed in the addendum Indiana archaeological short report (Bennett/Plunkett. 09/09/2019), that no further archaeological investigations appear necessary at the additional portions of the proposed project area that were subjected to archaeological reconnaissance survey.

If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and -29) requires that the discovery be reported to INDNR-DHPA within two (2) business days. In that event, please call (317) 232-1646. Be advised that adherence to Indiana Code 14-21-1-27 and -29 does not obviate the need to adhere to applicable federal statutes and regulations, including but not limited to 36 C.F.R. Part 800.

Accordingly, we believe that the January 28, 2019 finding made by INDOT, on behalf of FHWA, of "No Historic Properties Affected" is still valid in this case.

The reviewers of this project on the Indiana SHPO staff are Wade T. Tharp for archaeology and Danielle Kauffmann for structures. However, if you have questions about the status of a review, about the review process, or about the information to submit for review, please contact first one of the assigned reviewers at INDOT's Cultural Resources Office.

In any future correspondence regarding the 191st Street/Grass Branch Road Intersection Improvements project in Washington Township, Hamilton County, Indiana (Des. No. 1700731), please refer to DHPA No. 22634.

Very truly yours,



Beth K. McCord
Deputy State Historic Preservation Officer

BKM:DMK:WTT:dmk

emc: Robert Dirks, P.E., FHWA
Anuradha Kumar, INDOT
Susan Branigin, INDOT
Shaun Miller, INDOT
Shirley Clark, INDOT
Dan Stevens, DLZ Indiana, LLC
Wade T. Tharp, INDNR-DHPA
Danielle Kauffmann, INDNR-DHPA

APPENDIX E

Red Flag Investigation



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix E

Date: June 14, 2019

To: Site Assessment & Management
Environmental Policy Office – Environmental Services Division
Indiana Department of Transportation
100 N Senate Avenue, Room N642
Indianapolis, IN 46204

From: DLZ Indiana
2211 E Jefferson Blvd
South Bend, IN, 46615

Re: RED FLAG INVESTIGATION
DES # 1700731, Local Project
Intersection Improvements
191st and Grassy Branch Road
Hamilton County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The proposed project involves the reconstruction of the intersection of 191st Street and Grassy Branch Road as a two-lane roundabout in Hamilton County, Indiana. The project includes approach improvements, new sidewalk, a multi-use path, new lighting, and drainage improvements. The roadway improvements extend along both 191st Street and Grassy Branch Road approaches approximately 500 feet in each direction from the intersection. Drainage improvements (storm sewer) will extend south of the intersection along Grassy Branch Road approximately 1,700 feet to Cool Creek.

Bridge and/or Culvert Project: Yes ☐ No ☒ Structure # _____

If this is a bridge project, is the bridge Historical? Yes ☐ No ☐ , Select ☐ Non-Select ☐

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary ☐ # Acres _____ Permanent ☒ # Acres <0.5

Type of excavation: Shallow excavation for road and trail construction, as well as excavation to expand the existing drainage basin to the northeast of the project, as well as a new underground piped detention system on the west side of the project. Maximum depth of excavation is estimated to be 13 feet.

Maintenance of traffic: Traffic will be maintained during construction via a detour.

Work in waterway: Yes ☒ No ☐ Above ordinary high water mark: Yes ☒ No ☐

State Project: ☐ LPA: ☒

Any other factors influencing recommendations: N/A

Remainder of page intentionally left blank.

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	N/A	Recreational Facilities	N/A
Airports ¹	N/A	Pipelines	1
Cemeteries	N/A	Railroads	N/A
Hospitals	N/A	Trails	8
Schools	N/A	Managed Lands	N/A

¹In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required.

Explanation:

Pipelines

One (1) pipeline is within the 0.5-mile search radius. A pipeline owned by Marathon Gas company intersects the southern portion of the project area approximately 0.12 mile south of the intersection of 191st and Grassy Branch Road. Coordination with Marathon Gas Company will occur.

Trails

Eight (8) trail segments are located within the 0.5-mile search radius. All eight are planned or potential trails managed by the Town of Westfield. Coordination with the Town of Westfield will occur.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	N/A	Canal Routes - Historic	N/A
Karst Springs	N/A	NWI - Wetlands	21
Canal Structures – Historic	N/A	Lakes	3
NPS NRI Listed	N/A	Floodplain - DFIRM	5
NWI-Lines	N/A	Cave Entrance Density	N/A
IDEM 303d Listed Streams and Lakes (Impaired)	N/A	Sinkhole Areas	N/A
Rivers and Streams	1	Sinking-Stream Basins	N/A

Explanation:

Rivers and Streams

One (1) stream feature, Cool Creek, is within the 0.5-mile radius. At its nearest point, it is adjacent to the southern terminus of the project area. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

NWI – Wetlands

Twenty-one (21) wetland polygons are within the 0.5-mile radius. One wetland polygon is mapped within the project area northwest of the intersection of 191st and Grassy Branch Road. A Waters of the US Report is recommended and coordination with the appropriate agency, if applicable, will occur.

Lakes

Three (3) lake polygons are within the 0.5-mile search radius. The nearest is approximately 0.3-mile east of the project area. No impact is anticipated.

Investigation of Aerial photography shows another pond approximately 0.03 mile northeast of the intersection of 191st Street at Grassy Branch Road. No impact is anticipated.

Floodplains – DFIRM

One floodplain polygon is within the 0.5-mile search radius. The southern end of the project is within the floodplain of Cool Creek. Coordination with the appropriate agency will occur.

URBANIZED AREA BOUNDARY SUMMARY

Explanation:

The project is within the City of Westfield UAB. Post construction Storm Water Quality Best Management Practices (BMPs) may need to be considered. An early coordination letter with topographic and aerial maps showing the project area should be sent to the Westfield MS4 coordinator at 2706 East 171st Street, Westfield, IN, 46074.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	3	Mineral Resources	N/A
Mines – Surface	N/A	Mines – Underground	N/A

Explanation:

Three (3) petroleum wells are within the 0.5-mile search radius. The nearest is 0.17 mile south of the southern project terminus. No impact is anticipated.

Remainder of page intentionally left blank.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	N/A	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	N/A	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	N/A	Brownfields	N/A
Construction Demolition Waste	N/A	Institutional Controls	N/A
Solid Waste Landfill	N/A	NPDES Facilities	1
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A
Leaking Underground Storage (LUST) Sites	N/A	Notice of Contamination Sites	N/A

Explanation:

NPDES Facilities

One (1) NPDES Facility is within the 0.5-mile search radius. It is approximately 0.49 mile east of the project area. No impact is anticipated.

ECOLOGICAL INFORMATION SUMMARY

The Hamilton County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did not indicate the presence of ETR species within the 0.5 mile search radius. Coordination with USFWS and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

An inquiry using the USFWS Information for Planning and Consultation (IPaC) website did not indicate the presence of the federally endangered species, the Rusty Patched Bumble Bee, in or within 0.5 mile of the project area.

RECOMMENDATIONS SECTION

Include recommendations from each section. If there are no recommendations, please indicate N/A:

INFRASTRUCTURE:

Pipelines: One (1) pipeline is within the 0.5-mile search radius. Coordination with Marathon Gas Company will occur.

Eight (8) trail segments are located within the 0.5-mile search radius. Coordination with the Town of Westfield will occur.

WATER RESOURCES:

The presence of the following water resources will require the preparation of a Waters of the US Report and coordination with the appropriate agency, if applicable:

One (1) stream feature Cool Creek, adjacent to the southern terminus of the project area.

One wetland polygon mapped within the project area northwest of the intersection of 191st and Grassy Branch Road.

The southern end of the project is within the floodplain of Cool Creek (coordination only).

URBANIZED AREA BOUNDARY:

The project is within the City of Westfield UAB. Post construction Storm Water Quality Best Management Practices (BMPs) may need to be considered. An early coordination letter with topographic and aerial maps showing the project area should be sent to the Westfield MS4 coordinator at 2706 East 171st Street, Westfield, IN, 46074.

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: N/A

ECOLOGICAL INFORMATION:

Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT Environmental Services concurrence: Nicole Fohey-Breting (Signature)

Prepared by:
Isaac Miller
Civil Engineer
DLZ Indiana, LLC

June 17, 2019

Graphics:

A map for each report section with a 0.5 mile search radius buffer around all project area(s) showing all items identified as possible items of concern is attached. If there is not a section map included, please change the YES to N/A:

SITE LOCATION: YES

INFRASTRUCTURE: YES

WATER RESOURCES: YES

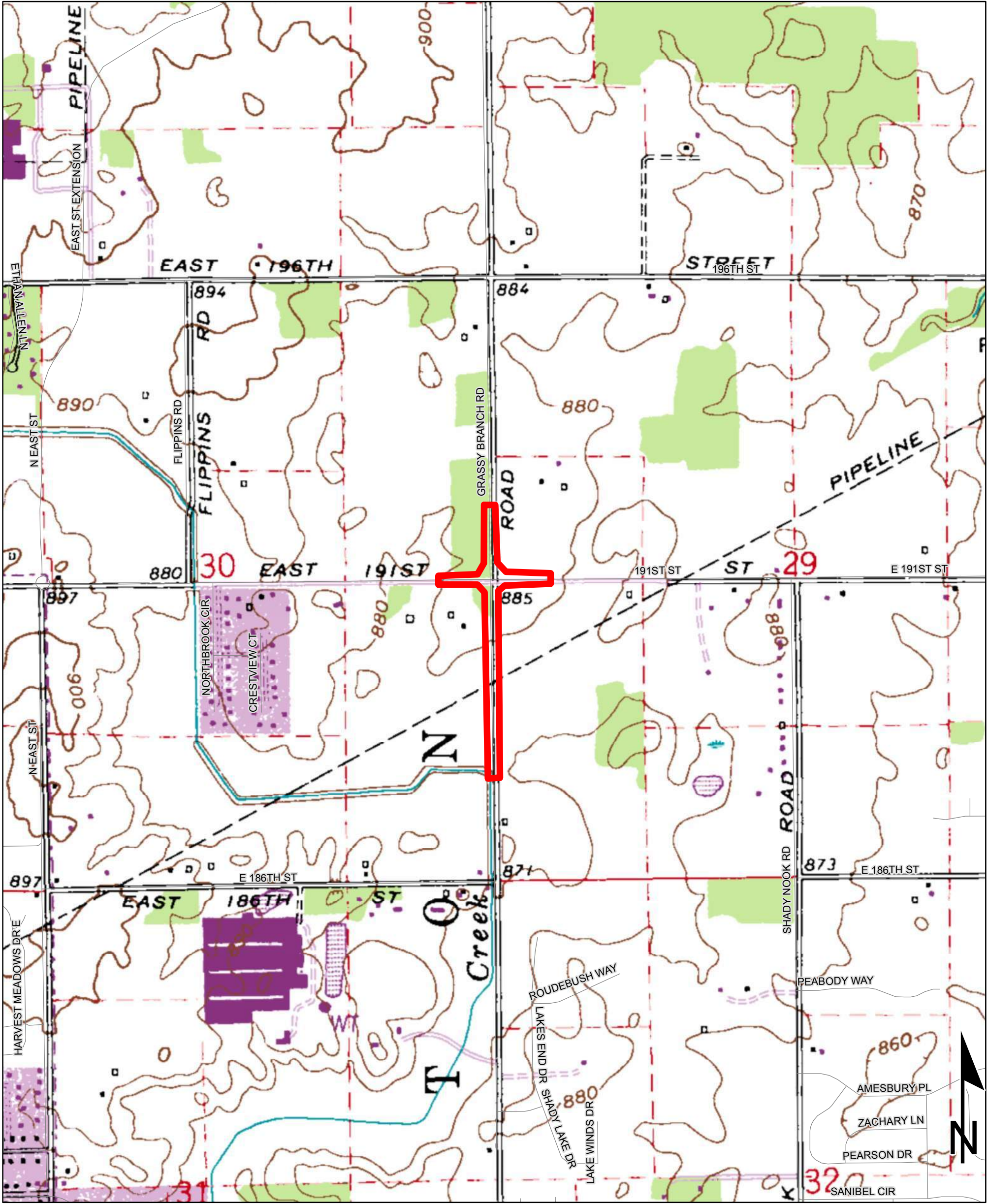
URBANIZED AREA BOUNDARY: YES

MINING/MINERAL EXPLORATION: YES

HAZMAT CONCERNS: YES



Red Flag Investigation - Site Location
191st Street and Grassy Branch Road
Des. No. 1700731 , Roundabout Construction
Hamilton County, Indiana

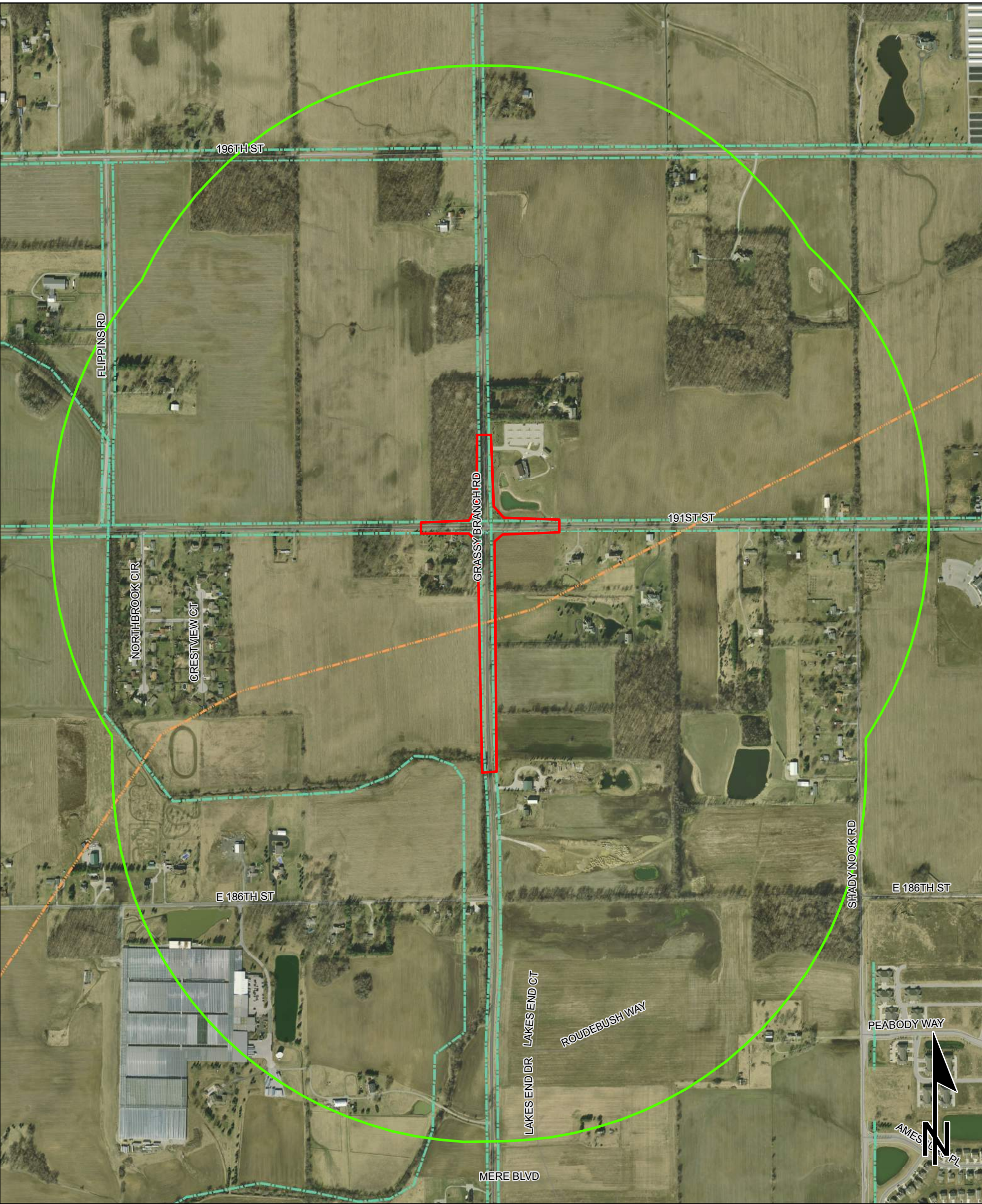


Sources: 0.2 0.1 0 0.2 Miles
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N Map Datum: NAD83
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

NOBLESVILLE QUADRANGLE
INDIANA
7.5 MINUTE SERIES
(TOPOGRAPHIC)



Red Flag Investigation - Infrastructure
191st Street and Grassy Branch Road
Des. No. 1700731 , Roundabout Construction
Hamilton County, Indiana

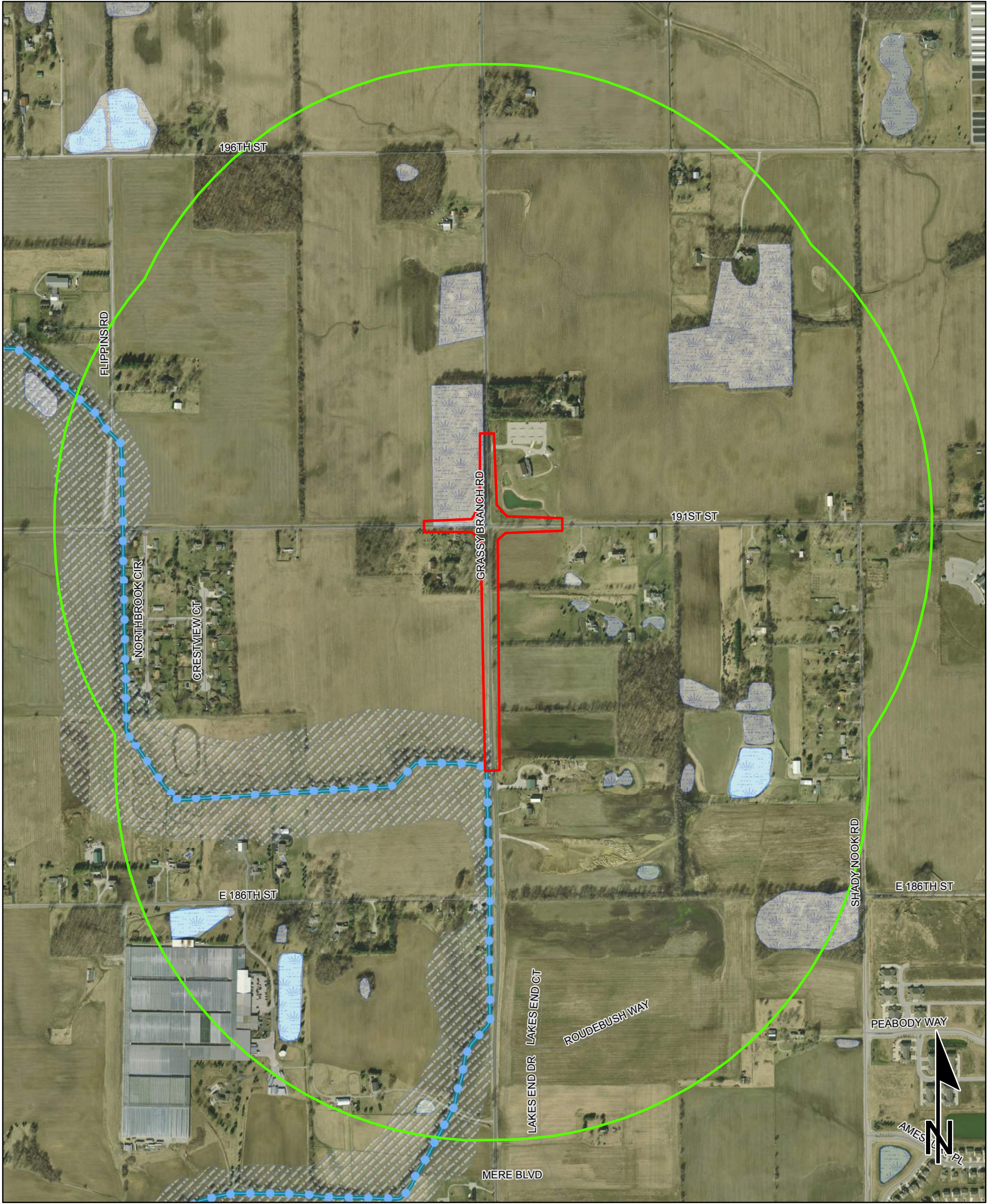


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Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N Map Datum: NAD83
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

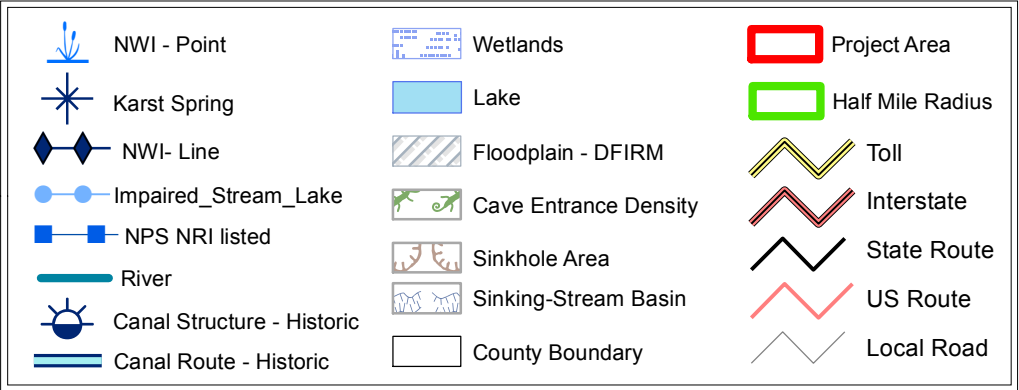


Red Flag Investigation - Water Resources
191st Street and Grassy Branch Road
Des. No. 1700731 , Roundabout Construction
Hamilton County, Indiana



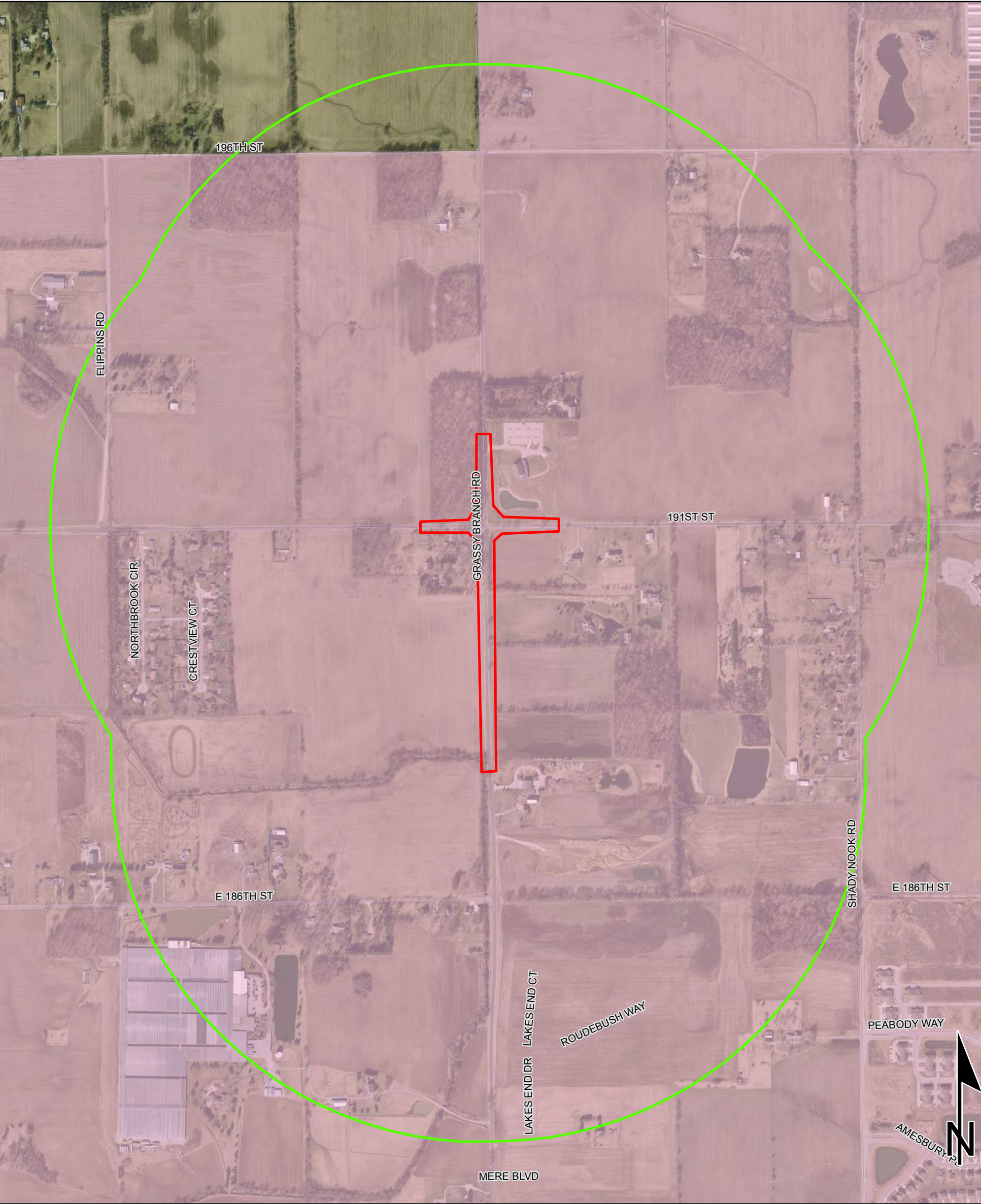
Sources:
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Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83

This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

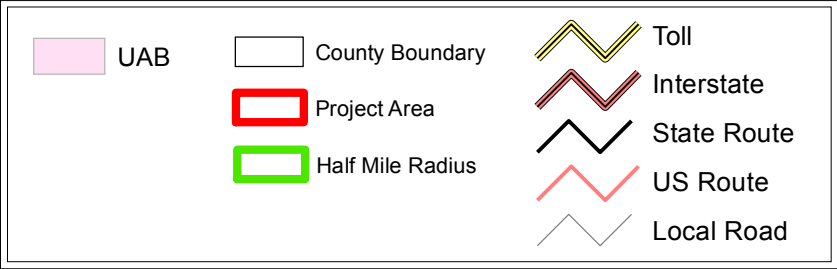




Red Flag Investigation - UAB
191st Street and Grassy Branch Road
Des. No. 1700731 , Roundabout Construction
Hamilton County, Indiana

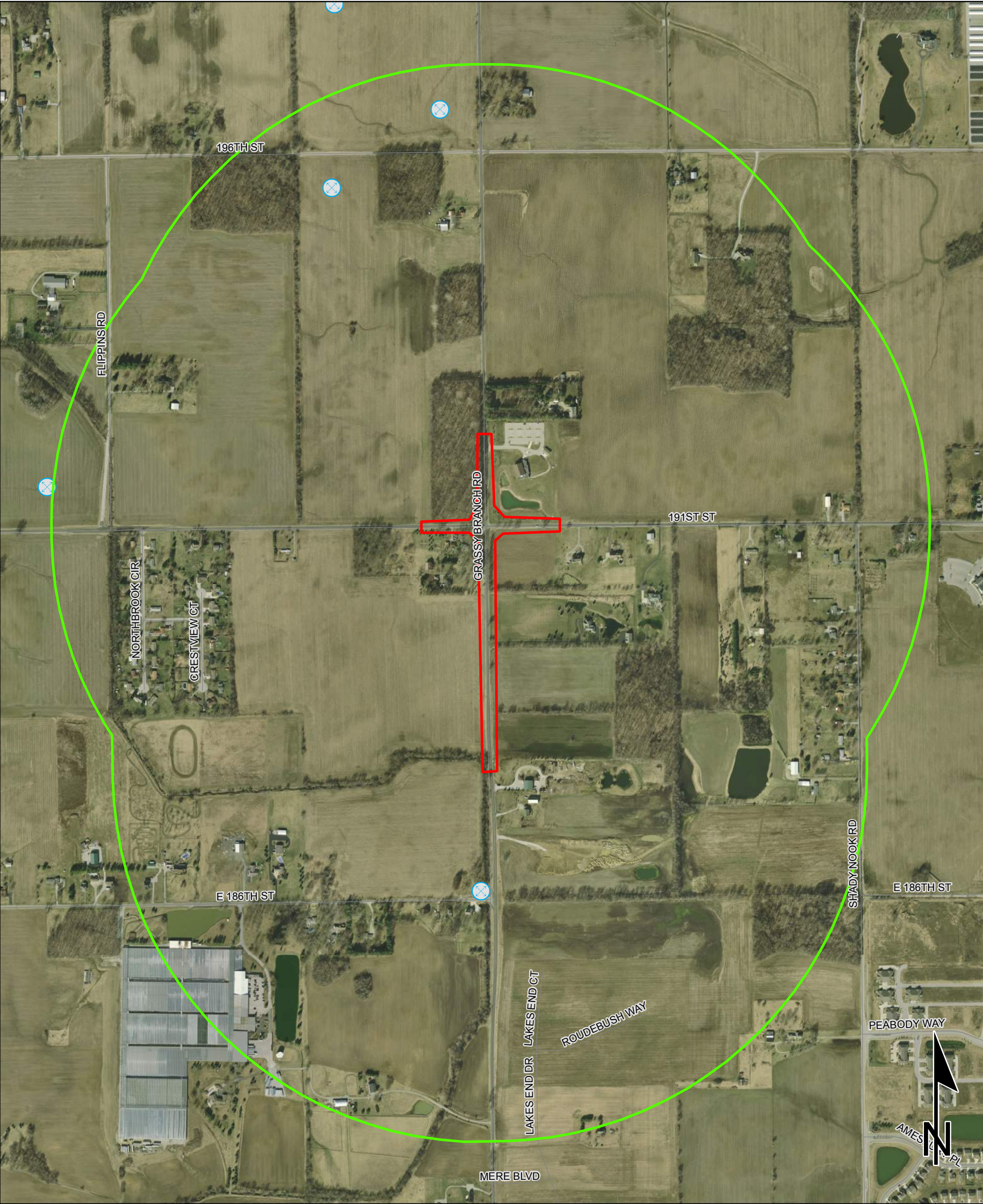


Sources: 0.15 0.075 0 0.15 Miles
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N Map Datum: NAD83
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.





Red Flag Investigation - Mining/Mineral Exploration
191st Street and Grassy Branch Road
Des. No. 1700731 , Roundabout Construction
Hamilton County, Indiana

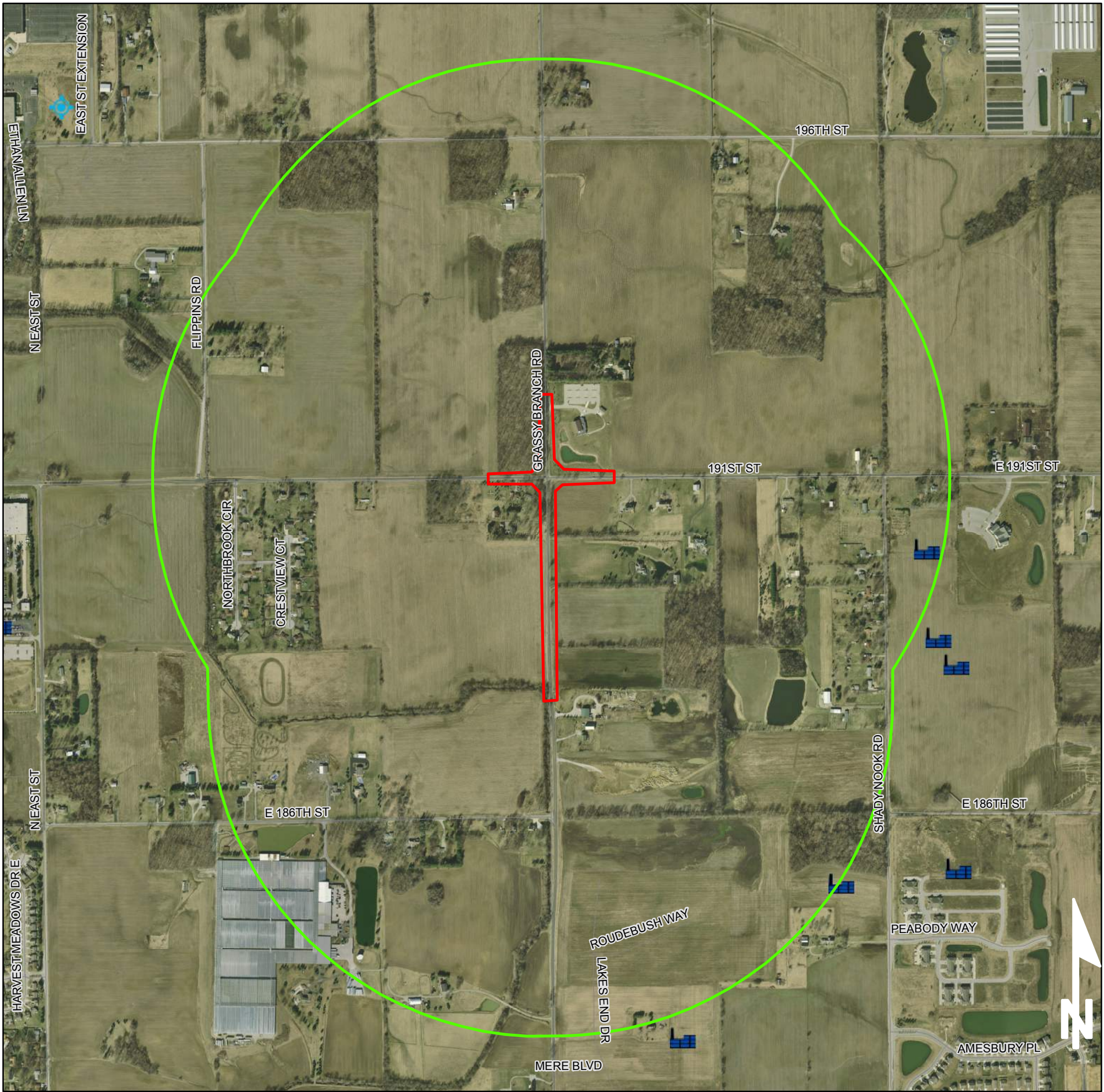


Sources: 0.15 0.075 0 0.15 Miles
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N **Map Datum:** NAD83
This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Oil and Gas Wells	County Boundary	Toll
Mineral Resources	Project Area	Interstate
Mine - Surface	Half Mile Radius	State Route
Mine - Underground		US Route
		Local Road



Red Flag Investigation- Hazardous Material Concerns
191st Street and Grassy Branch Road
Des. No. 1700731 , Roundabout Construction
Hamilton County, Indiana



Brownfield	RCRA Generator/TSD	Institutional Controls
RCRA Corrective Action Sites	Restricted Waste Site	County Boundary
Confined Feeding Operation	Septage Waste Site	Project Area
Notice_Of_Contamination	Solid Waste Landfill	Half Mile Radius
Construction/Demolition Site	State Cleanup Site	Toll
Infectious/Medical Waste Site	Superfund	Interstate
Leaking Underground Storage Tank	Tire Waste Site	State Route
Manufactured Gas Plant	Underground Storage Tank	US Route
NPDES Facilites	Voluntary Remediation Program	Local Road
NPDES Pipe Locations	Waste Transfer Station	
Open Dump Waste Site		

Indiana County Endangered, Threatened and Rare Species List

County: Hamilton

Species Name	Common Name	FED	STATE	GRANK	SRANK
Mollusk: Bivalvia (Mussels)					
Epioblasma torulosa rangiana	Northern Riffleshell	LE	SE	G2T2	S1
Epioblasma triquetra	Snuffbox	LE	SE	G3	S1
Lampsilis fasciola	Wavyrayed Lampmussel		SSC	G5	S3
Ligumia recta	Black Sandshell			G4G5	S2
Obovaria subrotunda	Round Hickorynut	C	SE	G4	S1
Plethobasus cyphus	Sheepnose	LE	SE	G3	S1
Pleurobema clava	Clubshell	LE	SE	G1G2	S1
Ptychobranhus fasciolaris	Kidneyshell		SSC	G4G5	S2
Quadrula cylindrica cylindrica	Rabbitsfoot	LT	SE	G3G4T3	S1
Toxolasma lividus	Purple Lilliput	C	SSC	G3Q	S2
Venustaconcha ellipsiformis	Ellipse		SSC	G4	S2
Villosa fabalis	Rayed Bean	LE	SE	G2	S1
Villosa lienosa	Little Spectaclecase		SSC	G5	S3
Insect: Odonata (Dragonflies & Damselflies)					
Enallagma divagans	Turquoise Bluet		SR	G5	S3
Amphibian					
Acris blanchardi	Northern Cricket Frog		SSC	G5	S4
Lithobates pipiens	Northern Leopard Frog		SSC	G5	S2
Necturus maculosus	Common mudpuppy		SSC	G5	S2
Reptile					
Clemmys guttata	Spotted Turtle	C	SE	G5	S2
Sistrurus catenatus catenatus	Eastern Massasauga	LT	SE	G3	S2
Bird					
Bartramia longicauda	Upland Sandpiper		SE	G5	S3B
Buteo lineatus	Red-shouldered Hawk		SSC	G5	S3
Certhia americana	Brown Creeper			G5	S2B
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
Ixobrychus exilis	Least Bittern		SE	G5	S3B
Lanius ludovicianus	Loggerhead Shrike		SE	G4	S3B
Nycticorax nycticorax	Black-crowned Night-heron		SE	G5	S1B
Pandion haliaetus	Osprey		SE	G5	S1B
Setophaga cerulea	Cerulean Warbler		SE	G4	S3B
Thryomanes bewickii	Bewick's Wren			G5	S1B
Mammal					
Lasionycteris noctivagans	Silver-haired Bat		SSC	G3G4	SNRN
Taxidea taxus	American Badger		SSC	G5	S2
Vascular Plant					
Armoracia aquatica	Lake Cress		SE	G4?	S1

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: **Hamilton**

Species Name	Common Name	FED	STATE	GRANK	SRANK
Chelone obliqua var. speciosa	Rose Turtlehead		WL	G4T3	S3
Crataegus grandis	Grand Hawthorn		SE	G3G5Q	S1
Drosera intermedia	Spoon-leaved Sundew		SR	G5	S2
Magnolia acuminata	Cucumber Magnolia		SE	G5	S1
Platanthera leucophaea	Prairie White-fringed Orchid	LT	SE	G2G3	S1
High Quality Natural Community					
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland mesic Central Till Plain	Central Till Plain Mesic Upland Forest			GNR	S3

Indiana Natural Heritage Data Center
Division of Nature Preserves
Indiana Department of Natural Resources
This data is not the result of comprehensive county surveys.

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GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

APPENDIX F

Water Resources



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix F

WATERS OF THE U.S. REPORT

191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Prepared By:



**DLZ Indiana, LLC
2211 East Jefferson Boulevard
South Bend, Indiana 46615**

May 2, 2018

WATERS OF THE U.S. REPORT

191st Street/Grassy Branch Road

Intersection Improvements

Des. No.: 1700731

Hamilton County, Indiana

Report By: Dan Stevens, Environmental Scientist, DLZ Indiana, LLC

May 2, 2018

Introduction

DLZ conducted a “Waters of the United States” determination on November 7, 2017 for the project involving the reconstruction of the intersection of 191st Street and Grassy Branch Road as a roundabout in Hamilton County, Indiana. The project includes approach improvements, new sidewalk/multiuse path, new lighting, and drainage improvements. The roadway improvements extend along both 191st Street and Grassy Branch Road approaches approximately 500 feet in each direction from the intersection. Drainage improvements (storm sewer) will extend south of the intersection along Grassy Branch Road approximately 1,700 feet to Cool Creek (also referred to as Wheeler and Beals Legal Drain). The project is within Washington Township, USGS Noblesville Topographic Quadrangle, in Sections 29 and 30, Township 19 North, Range 4 East of Hamilton County, Indiana (**See Figure 1**).

The USGS Topographic Map of the USGS Noblesville Quadrangle shows Cool Creek (also referred to as Wheeler and Beals Legal Drain) as a perennial blue-line stream in the project area (**See Figure 2-3**). No other drainage features were identified in the project limits.

The National Wetlands Inventory (NWI) shows the northwest quadrant of the intersection as a PFO1A (Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded Hydrology) wetland feature. No other NWI features were identified in the project limits (**See Figure 4**).

According to the Soil Survey Geographic (SSURGO) Database for Hamilton County, Indiana, the following soil units are located in the project area (**See Figure 5**). Of these, Brookston silty clay loam, 0 to 2 percent slopes (Br), Patton silty clay loam, 0 to 2 percent slopes (Pn), and Westland silty clay loam, 0 to 2 percent slopes (We) are listed as hydric soil units.

- Brookston silty clay loam, 0 to 2 percent slopes (Br)
- Crosby silt loam, fine loamy subsoil, 0 to 2 percent slopes (CrA)
- Miami silt loam, 2 to 6 percent slopes, eroded (MmB2)
- Ockley silt loam, 0 to 2 percent slopes (OcA)
- Patton silty clay loam, 0 to 2 percent slopes (Pn)
- Sleeth loam (St)
- Westland silty clay loam, 0 to 2 percent slopes (We)

See Table 1 for a summary of the waters determination. See **Figures 1-7** for maps of the project area. See **Appendix A** for pictures.

Field Reconnaissance

Field reconnaissance identified Cool Creek in the project area. The estimated drainage area of Cool Creek at the project site is approximately 2.7 square miles. Cool Creek meets one of the requirements to be considered a jurisdictional Water of the U.S. since it displays an ordinary high water mark (OHWM). Since Cool Creek also connects to a traditional navigable water it is therefore considered a Water of the U.S. Approximately 11.8 miles downstream from the project site, Cool Creek joins the White River, a traditional navigable water. The width at the OHWM is approximately 13 feet. The depth at the OHWM is approximately 1.5 feet. The substrate consists of sand and silt. The stream quality of Cool Creek considered poor since it is a ditched/channelized feature. The OHWM of Cool Creek is shown on **Figure 7**.

Field reconnaissance also identified a manmade pond (retention basin) in the northeast quadrant of the intersection. This pond was built in 2007 based on historical aerial photographs. Enclosed storm sewer pipes and parking lot drainage enter this feature. This feature is not considered a Waters of the U.S. per 33 CFR 328.3 (b)(6) because it is a stormwater control feature constructed to convey, treat, or store stormwater that was created in dry land. In addition, features such as this are not considered to be waters of the State of Indiana per 327 IAC 17-1-3-13-B and C where the term “waters” is defined to exclude private ponds (part B), or facilities such as an off-stream pond, reservoir, wetland, or other facility built for reduction or control of pollution or cooling of water before discharge (part C).

No roadside ditches were observed in the project area that displayed an OHWM, defined bed and banks, or relatively permanent flow.

No wetlands were identified in the project limits. Three representative sample points were studied for the presence of wetlands. The delineation procedures and wetland criteria outlined in the 1987 Corps of Engineers Wetland Delineation Manual were used for this study. In addition, the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) was applied to the project area. Wetland Data sheets are attached (See **Appendix B**). Following is a summary of each sample point:

Upland (Sample Point 1)

Sample point 1 was located in the wooded area in the northwest quadrant of the intersection. This area is shown as a PFO1a wetland on the NWI map. The dominant plants at this plot were sugar maple (*Acer saccharum*, FACU), black cherry (*Prunus serotina*, FACU), black walnut (*Juglans nigra*, FACU), red oak (*Quercus rubra*, FACU), basswood (*Tilia americana*, FACU), pawpaw (*Asimina triloba*, FAC), hackberry (*Celtis occidentalis*, FAC), honeysuckle (*Lonicera tatarica*, FACU), beech (*Fagus grandifolia*, FACU), Virginia creeper (*Parthenocissus quinquefolia*, FACU), and green briar (*Smilax glauca*, FACU). These plants do not meet the hydrophytic plant criteria. No wetland hydrology indicators were observed. The soil was 10YR 3/2 silt loam from 0 to 10 inches and 10YR 5/2 clay with 10 YR 4/6 mottles from 10 to 20 inches. The presence of the hydric soil indicator of depleted

matrix (F3) demonstrates that the site contains hydric soils. However, the site is apparently well drained and does not contain wetland plants. This plot does not meet the three wetland criteria and is not a wetland.

Upland (Sample Point 2)

Sample point 2 was located in the wooded area in the northwest quadrant of the intersection. This area is shown as a PFO1a wetland on the NWI map. The dominant plants at this plot were sugar maple (*Acer saccharum*, FACU), beech (*Fagus grandifolia*, FACU), black walnut (*Juglans nigra*, FACU), white ash (*Fraxinus americana*, FACU), honeysuckle (*Lonicera tatarica*, FACU), Virginia creeper (*Parthenocissus quinquefolia*, FACU), and green briar (*Smilax glauca*, FACU). These plants do not meet the hydrophytic plant criteria. No wetland hydrology indicators were observed. The soil was 10YR 3/2 silt loam from 0 to 10 inches and 10YR 5/2 clay with 10 YR 4/6 mottles from 10 to 20 inches. The presence of the hydric soil indicator of depleted matrix (F3) demonstrates that the site contains hydric soils. However, the site is apparently well drained and does not contain wetland plants. This plot does not meet the three wetland criteria and is not a wetland.

Upland (Sample Point 3)

Sample point 3 was located in the residential/wooded area in the southwest quadrant of the intersection. The dominant plants at this plot were black walnut (*Juglans nigra*, FACU), hackberry (*Celtis occidentalis*, FAC), cottonwood (*Populus deltoides*, FAC), autumn olive (*Elaeagnus angustifolia*, FACU), mulberry (*Morus alba*, FAC), smooth brome (*Bromus inermis*, FACU), tall fescue (*Schedonorus arundinaceus*, FACU), tall goldenrod (*Solidago altissima*, FACU), green briar (*Smilax glauca*, FACU), and periwinkle (*Vinca minor*, FACU). These plants do not meet the hydrophytic plant criteria. No wetland hydrology indicators were observed. The soil was 10YR 3/2 silt loam from 0 to 10 inches and 10YR 5/2 clay with 10 YR 4/6 mottles from 10 to 20 inches. The presence of the hydric soil indicator of depleted matrix (F3) demonstrates that the site contains hydric soils. However, the site is apparently well drained and does not contain wetland plants. This plot does not meet the three wetland criteria and is not a wetland.

Conclusions

The USGS Topographic Map of the Noblesville Quadrangle shows Cool Creek as a perennial drainage feature in the project area. Field reconnaissance confirmed that Cool Creek is a perennial drainage feature and displayed an OHWM. Cool Creek also connects to a traditional navigable water and is therefore considered a Water of the U.S. No jurisdictional wetland areas were identified in the project limits. A manmade pond (retention basin) in the northeast quadrant of the intersection is not considered a water of the U.S. or a water of the State of Indiana since it is a manmade private pond for stormwater control. Every effort should be taken to avoid and minimize impacts to the waterways. If impacts are necessary, then mitigation may be required. The final determination of jurisdictional waters is ultimately made by the U.S. Army Corps of Engineers (Corps) and this report is our best judgment based on the guidelines set forth by the Corps.

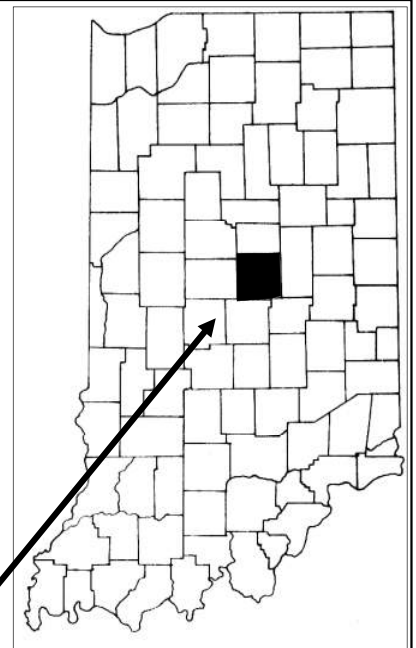
Table 1: Stream Summary
 191st Street/Grassy Branch Road
 Intersection Improvements
 Des. No.: 1700731
 Hamilton County, Indiana

Stream Name	Photos	Lat (N)	Lon (W)	OHWM		USGS Blue line?	Stream type (Perennial, Intermittent, Ephemeral)	Substrate	Riffles Pools?	Quality	Likely Water of U.S.?
				Average Width (feet)	Average Depth (feet)						
Cool Creek	18, 19, 20	40.060315°	-86.109379°	13	1.5	Yes	Perennial	Sand/Silt	No	Poor	Yes

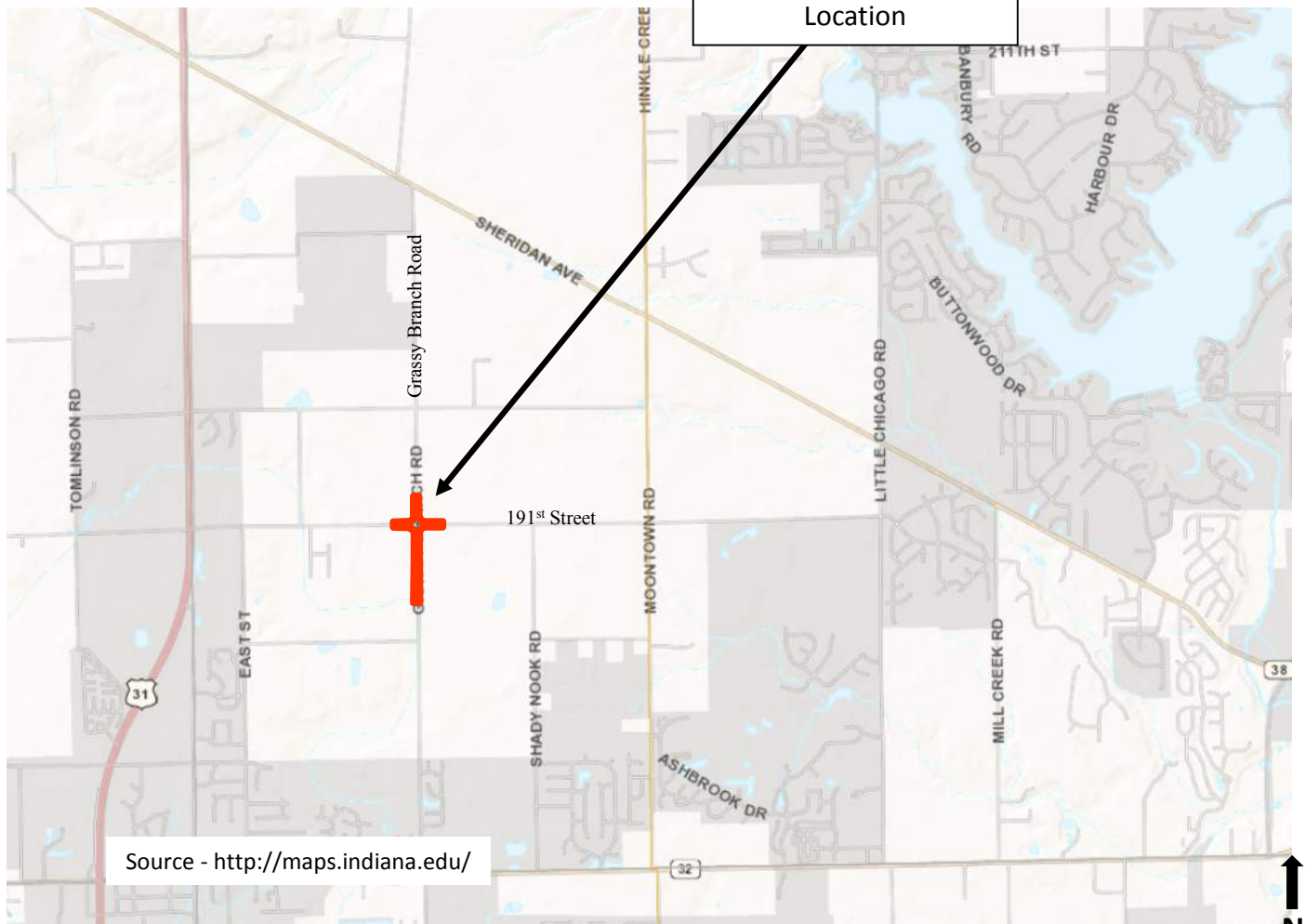
Table 2: Wetland Plot Summary Table
 191st Street/Grassy Branch Road
 Intersection Improvements
 Des. No.: 1700731
 Hamilton County, Indiana

Plot				
	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Within a wetland
SP-1	No	Yes	No	No
SP-2	No	Yes	No	No
SP-3	No	Yes	No	No

Project Location Graphics –
191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana



Approximate Project
Location

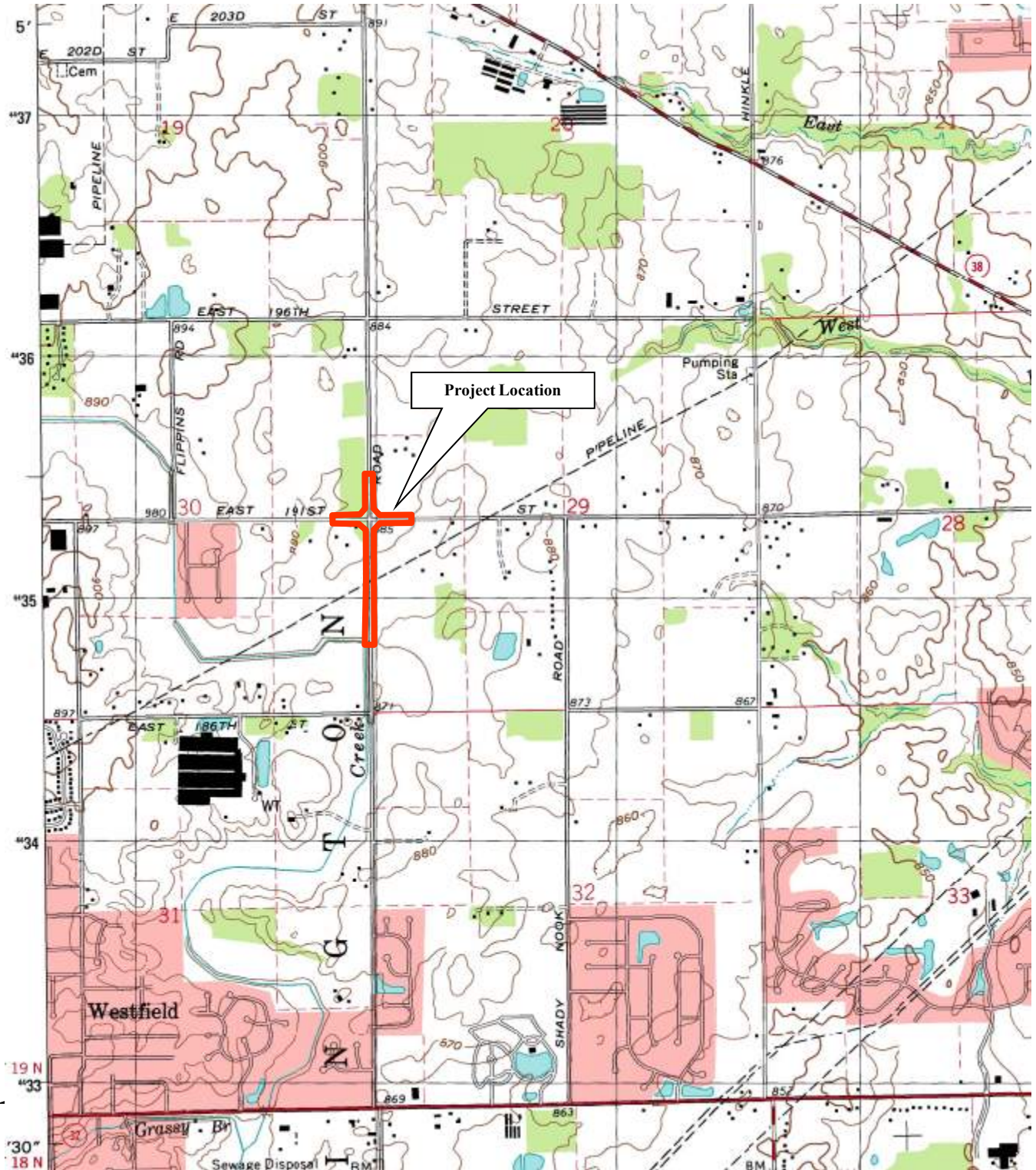


WATERS OF THE U.S. REPORT
 191st Street/Grassy Branch Road
 Intersection Improvements
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 Hamilton County, Indiana

Scale:
See Map

Figure: 1

USGS Quadrangle Map



USGS Noblesville Quadrangle Map

Source - http://gisdb.uits.indiana.edu/singlefile/map/IN24k_quad_index_1160_m10000.html

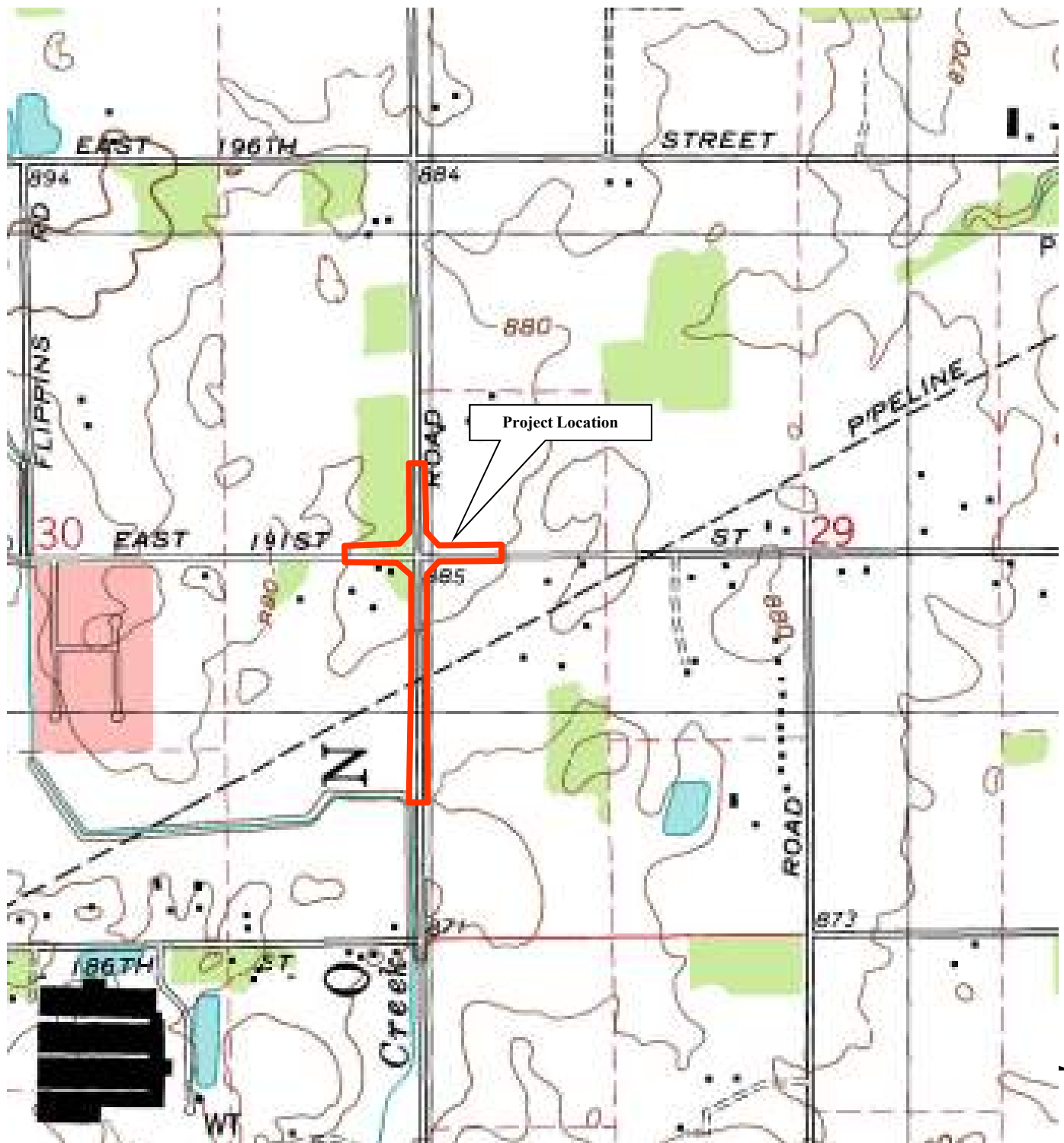


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Scale: 1"=2000'

Figure: 2

USGS Quadrangle Map



USGS Noblesville Quadrangle Map

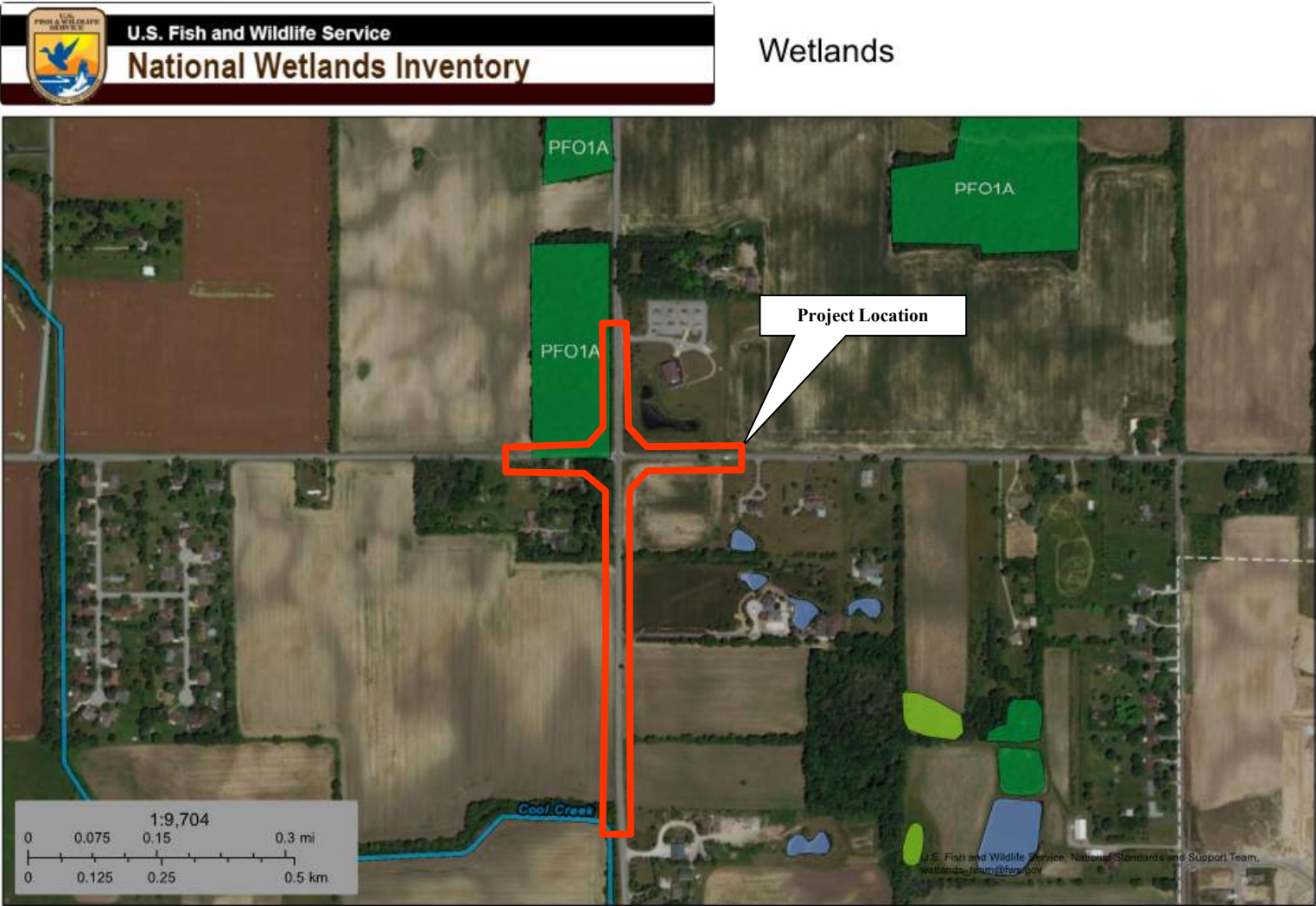
Source - http://gisdb.uits.indiana.edu/singlefile/map/IN24k_quad_index_1160_m10000.html



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Scale: 1"=1000'

Figure: 3



January 23, 2018

- Wetlands**
 - Estuarine and Marine Deepwater
 - Estuarine and Marine Wetland
- Freshwater Emergent Wetland
 - Freshwater Forested/Shrub Wetland
 - Freshwater Pond
- Lake
 - Other
 - Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper



NWI Legend	
PFO1A	Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded Hydrology

Figure: 4

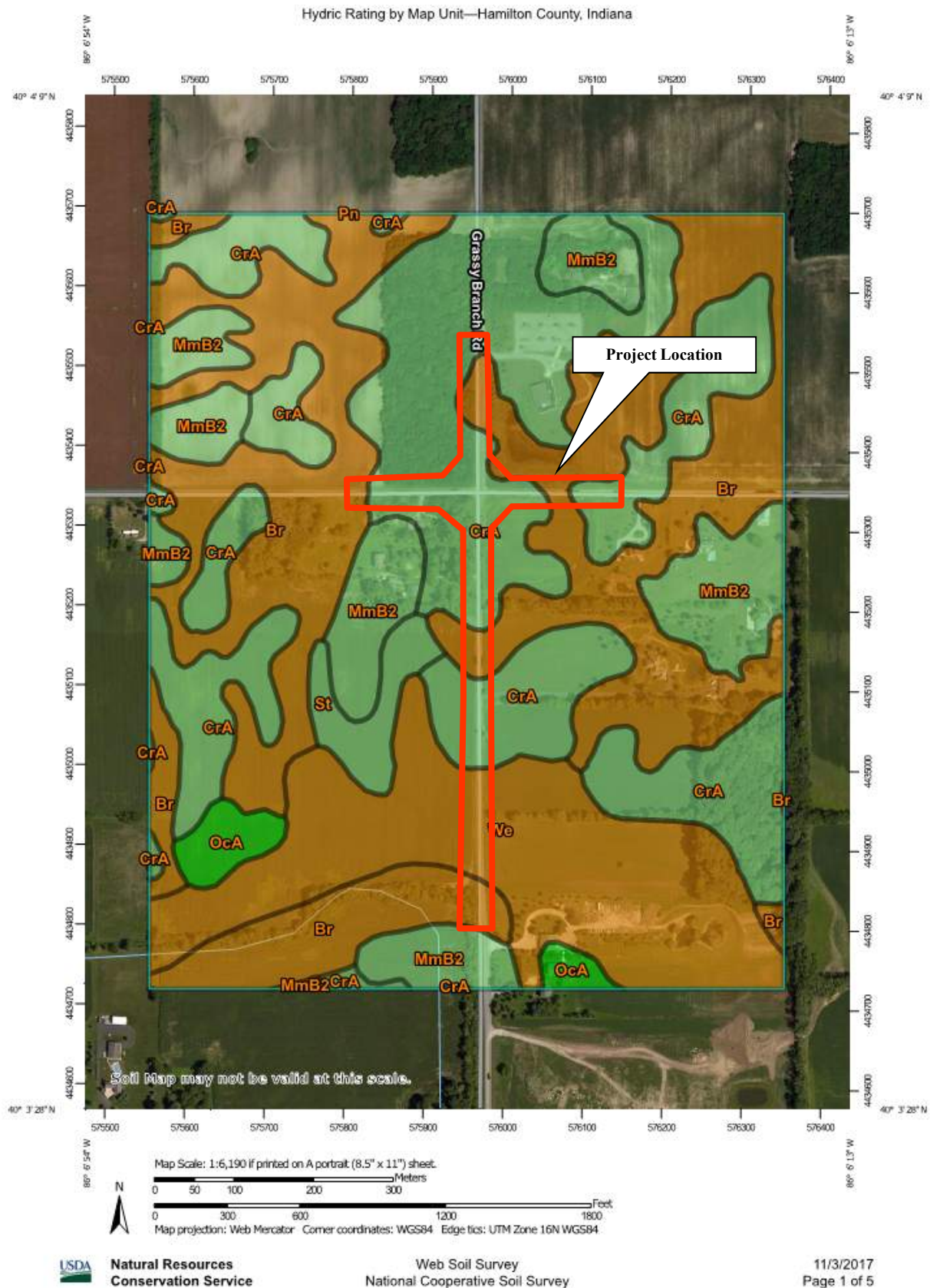


Figure: 5

Soil Survey Legend

DES. NUMBER: 1700731

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Br	Brookston silty clay loam, 0 to 2 percent slopes	95	66.1	34.3%
CrA	Crosby silt loam, fine-loamy subsoil, 0 to 2 percent slopes	2	65.1	33.8%
MmB2	Miami silt loam, 2 to 6 percent slopes, eroded	5	22.6	11.7%
OcA	Ockley silt loam, 0 to 2 percent slopes	0	3.4	1.7%
Pn	Patton silty clay loam, 0 to 2 percent slopes	90	0.0	0.0%
St	Sleeth loam	10	3.8	2.0%
We	Westland silty clay loam, 0 to 2 percent slopes	94	31.6	16.4%
Totals for Area of Interest			192.6	100.0%

Figure: 5

Floodplain Map

DES. NUMBER: 1700731

Date: 1/23/2018



Legend

Floodplains - FIRM

- Floodway
- 1% Annual Chance Flood Hazard
- 0.2% Annual Chance, Protected
- 0.2% Annual Chance Flood Hazard

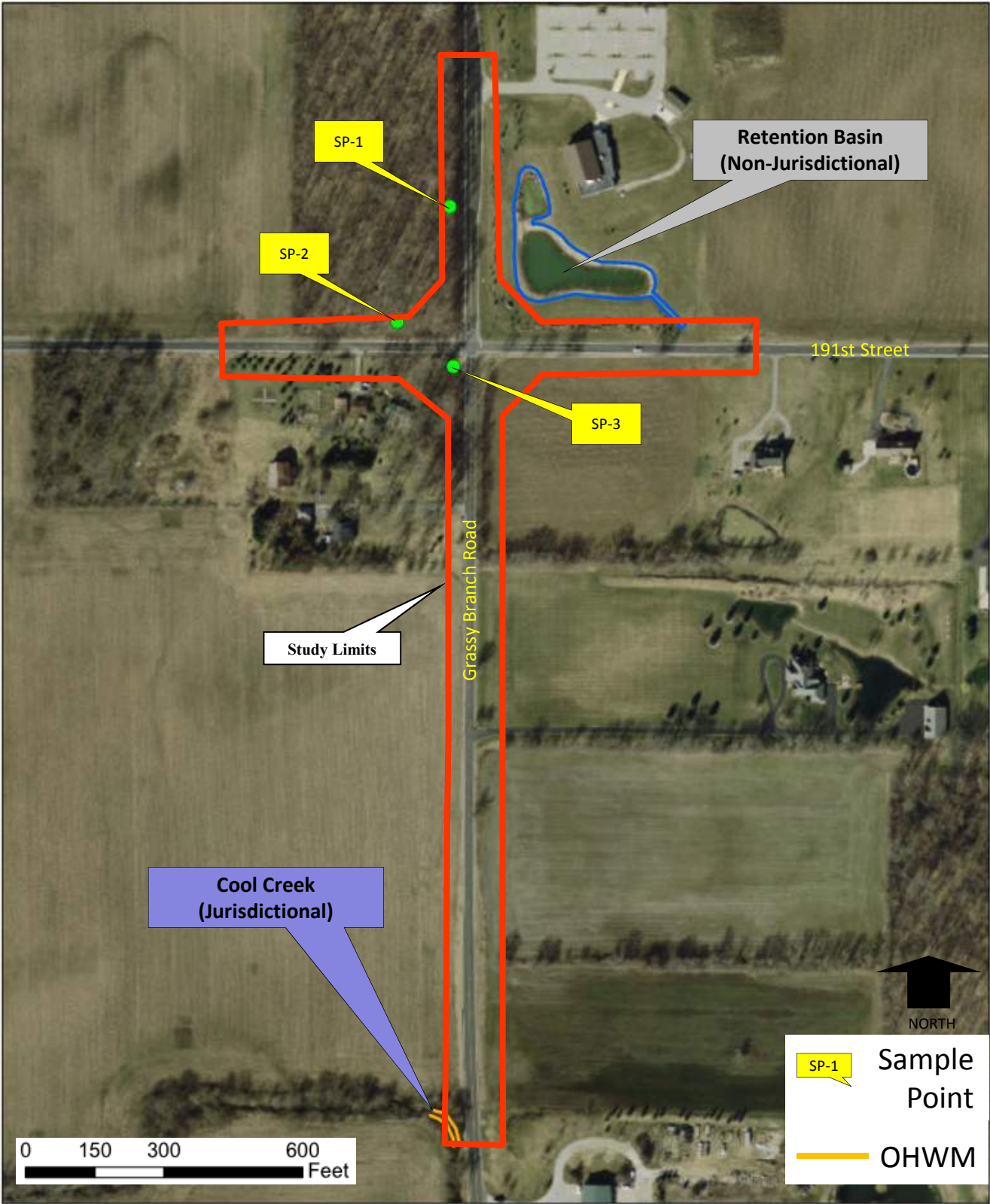
Author:

0 0.15 mi

IndianaMAP

Figure: 6

Site Map




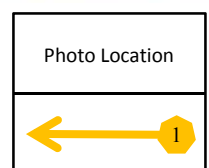
	WATERS OF THE U.S. REPORT 191st Street/Grassy Branch Road Intersection Improvements Des. No.: 1700731 Hamilton County, Indiana	Scale: See Map
		Figure: 7

Photo Log

DES. NUMBER: 1700731



Photographs – 11/7/2017



Photo 1: View south toward intersection



Photo 2: View north along Grassy Branch Road



Photo 3: View north in woodlot




Photo 4: View northwest in woodlot



Photo 5: View southwest in woodlot



Photo 6: View south in woodlot

	<p>WATERS OF THE U.S. REPORT 191st Street/Grassy Branch Road Intersection Improvements Des. No.: 1700731 Hamilton County, Indiana</p>	Scale: NTS
		Appendix A-2

Photographs – 11/7/2017



Photo 7: View west in woodlot



Photo 8: View south in woodlot



Photo 9: View east in woodlot



Photo 10: View north in woodlot



Photo 11: View west from project along 191st Street



Photo 12: View toward the intersection along 191st



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Scale: NTS

Appendix A-3

Photographs – 11/7/2017



Photo 13: View of the SW quadrant of the intersection



Photo 14: View of the SW quadrant of the Intersection



Photo 15: View north along Grassy Branch Road




Photo 16: View south along Grassy Branch Road



Photo 17: View north along Grassy Branch Road



Photo 18: View of Cool Creek looking west

	<p>WATERS OF THE U.S. REPORT 191st Street/Grassy Branch Road Intersection Improvements Des. No.: 1700731 Hamilton County, Indiana</p>	Scale: NTS
		Appendix A-4

Photographs – 11/7/2017



Photo 19: View of Cool Creek looking southeast



Photo 20: View of Cool Creek looking south



Photo 21: View west along 191st Street



Photo 22: View north along Retention Pond in NE quadrant



Photo 23: View east along Retention Pond in Northeast quadrant



Photo 24: View northwest toward Retention Pond at emergency overflow.



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Scale: NTS

Appendix A-5

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site 191st Street/Grassy Branch Road Intersector City/County: Hamilton Sampling Date: 11/7/2017
 Applicant/Owner: Hamilton County State: Indiana Sampling Point: 1 - Upland
 Investigator(s): Dan Stevens Section, Township, Range: S30, T19N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 40.065767° Long: 86.109410° Datum: _____
 Soil Map Unit Name Brookston silty clay loam, 0 to 2 percent slopes (Br) NWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation _____, soil _____, or hydrology _____ significantly disturbed?

Are "normal circumstances"

Are vegetation _____, soil _____, or hydrology _____ naturally problematic?

present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present?	<u>Y</u>	
Wetland hydrology present?	<u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point does not meet the three wetland criteria and is not considered a jurisdictional wetland.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet
1 <u>Acer saccharum</u>		40	Y	FACU	
2 <u>Prunus serotina</u>		30	Y	FACU	Total Number of Dominant Species Across all Strata: <u>6</u> (B)
3 <u>Juglans nigra</u>		10	N	FACU	Percent of Dominant Species that are OBL, FACW, or FAC: <u>16.67%</u> (A/B)
4 <u>Quercus rubra</u>		10	N	FACU	
5 <u>Tilia americana</u>		10	N	FACU	
		100	= Total Cover		
Sapling/Shrub stratum	(Plot size: <u>15'</u>)				Prevalence Index Worksheet
1 <u>Acer saccharum</u>		20	Y	FACU	
2 <u>Asimina triloba</u>		20	Y	FAC	OBL species <u>0</u> x 1 = <u>0</u>
3 <u>Celtis occidentalis</u>		10	N	FAC	FACW species <u>0</u> x 2 = <u>0</u>
4 <u>Lonicera tatarica</u>		10	N	FACU	FAC species <u>30</u> x 3 = <u>90</u>
5 <u>Fagus grandifolia</u>		5	N	FACU	FACU species <u>145</u> x 4 = <u>580</u>
		65	= Total Cover		UPL species <u>0</u> x 5 = <u>0</u>
					Column totals <u>175</u> (A) <u>670</u> (B)
Herb stratum	(Plot size: <u>5'</u>)				Prevalence Index = B/A = <u>3.83</u>
1 <u>Parthenocissus quinquefolia</u>		5	Y	FACU	Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
2 <u>Smilax glauca</u>		5	Y	FACU	
3 _____					
4 _____					
5 _____					
6 _____					
7 _____					
8 _____					
9 _____					
10 _____					
		10	= Total Cover		
Woody vine stratum	(Plot size: <u>30'</u>)				Hydrophytic vegetation present? <u>N</u>
1 _____					
2 _____					
		0	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

Hydrophytic vegetation was not observed.

SOIL

Sampling Point: 1 - Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR 3/2	100					silty loam	
10-20	10YR 5/2	75	10YR 4/6	25	C	M	clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 2 cm Muck (A10) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) | |

Indicators for Problematic Hydric Soils:

- | |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (explain in remarks) |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

 Type: _____
 Depth (inches): _____
Hydric soil present? Y

Remarks:

Hydric soil indicators were observed. Sample site is within the woodlot in the N.W. corner of the intersection. The woodlot is the apparent high point in the landscape and is apparently well drained.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- | |
|--|
| <input type="checkbox"/> Surface Water (A1) |
| <input type="checkbox"/> High Water Table (A2) |
| <input type="checkbox"/> Saturation (A3) |
| <input type="checkbox"/> Water Marks (B1) |
| <input type="checkbox"/> Sediment Deposits (B2) |
| <input type="checkbox"/> Drift Deposits (B3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) |
| <input type="checkbox"/> Iron Deposits (B5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Water-Stained Leaves (B9) |

- | |
|---|
| <input type="checkbox"/> Aquatic Fauna (B13) |
| <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Gauge or Well Data (D9) |
| <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<u>0</u>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<u>0</u>
Saturation present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<u>0</u>

 (includes capillary fringe)

 Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators were not observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site 191st Street/Grassy Branch Road Intersector City/County: Hamilton Sampling Date: 11/7/2017
 Applicant/Owner: Hamilton County State: Indiana Sampling Point: 2 - Upland
 Investigator(s): Dan Stevens Section, Township, Range: S30, T19N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 40.065080° Long: 86.109812° Datum: _____
 Soil Map Unit Name Crosby silt loam, fine loamy subsoil, 0 to 2 percent slopes (CrA) VWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation _____, soil _____, or hydrology _____ significantly disturbed?

Are "normal circumstances"

Are vegetation _____, soil _____, or hydrology _____ naturally problematic?

present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present? <u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present? <u>Y</u>	
Wetland hydrology present? <u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point does not meet the three wetland criteria and is not considered a jurisdictional wetland.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>7</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0.00%</u> (A/B)
1	<u>Acer saccharum</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Fagus grandifolia</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3	<u>Juglans nigra</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4	<u>Fraxinus americana</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
		<u>75</u>	= Total Cover		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>120</u> x 4 = <u>480</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>120</u> (A) <u>480</u> (B) Prevalence Index = B/A = <u>4.00</u>
Sapling/Shrub stratum	(Plot size: <u>15'</u>)				
1	<u>Fagus grandifolia</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Acer saccharum</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3	<u>Lonicera tatarica</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
		<u>30</u>	= Total Cover		
Herb stratum	(Plot size: <u>5'</u>)				Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
1	<u>Parthenocissus quinquefolia</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Smilax glauca</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
3					
4					
5					
6					
7					
8					
9					
		<u>15</u>	= Total Cover		
Woody vine stratum	(Plot size: <u>30'</u>)				Hydrophytic vegetation present? <u>N</u>
1					
2					
		<u>0</u>	= Total Cover		

Remarks: (Include photo numbers here or on a separate sheet)

Hydrophytic vegetation was not observed.

SOIL

Sampling Point: 2 - Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR 3/2	100					silty loam	
10-20	10YR 5/2	75	10YR 4/6	25	C	M	clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 2 cm Muck (A10) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) | |

Indicators for Problematic Hydric Soils:

- | |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (explain in remarks) |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____
Hydric soil present? Y**Remarks:**

Hydric soil indicators were observed. Sample site is within the woodlot in the N.W. corner of the intersection. The woodlot is the apparent high point in the landscape and is apparently well drained.

HYDROLOGY**Wetland Hydrology Indicators:**Primary Indicators (minimum of one is required; check all that apply)

- | |
|--|
| <input type="checkbox"/> Surface Water (A1) |
| <input type="checkbox"/> High Water Table (A2) |
| <input type="checkbox"/> Saturation (A3) |
| <input type="checkbox"/> Water Marks (B1) |
| <input type="checkbox"/> Sediment Deposits (B2) |
| <input type="checkbox"/> Drift Deposits (B3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) |
| <input type="checkbox"/> Iron Deposits (B5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Water-Stained Leaves (B9) |

- | |
|---|
| <input type="checkbox"/> Aquatic Fauna (B13) |
| <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Gauge or Well Data (D9) |
| <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<u>0</u>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<u>0</u>
Saturation present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches):	<u>0</u>

Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators were not observed.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site 191st Street/Grassy Branch Road Intersector City/County: Hamilton Sampling Date: 11/7/2017
 Applicant/Owner: Hamilton County State: Indiana Sampling Point: 3 - Upland
 Investigator(s): Dan Stevens Section, Township, Range: S30, T19N, R4E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none
 Slope (%): _____ Lat: 40.064815° Long: 86.109376° Datum: _____
 Soil Map Unit Name Crosby silt loam, fine loamy subsoil, 0 to 2 percent slopes (CrA) VWI Classification: PFO1A

Are climatic/hydrologic conditions of the site typical for this time of the year? Y (If no, explain in remarks)

Are vegetation _____, soil _____, or hydrology _____ significantly disturbed?

Are "normal circumstances"

Are vegetation _____, soil _____, or hydrology _____ naturally problematic?

present? Yes

SUMMARY OF FINDINGS

(If needed, explain any answers in remarks.)

Hydrophytic vegetation present?	<u>N</u>	Is the sampled area within a wetland? <u>N</u> If yes, optional wetland site ID: _____
Hydric soil present?	<u>Y</u>	
Wetland hydrology present?	<u>N</u>	

Remarks: (Explain alternative procedures here or in a separate report.)

The sample point does not meet the three wetland criteria and is not considered a jurisdictional wetland.

VEGETATION -- Use scientific names of plants.

Tree Stratum	(Plot size: <u>30'</u>)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>7</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>42.86%</u> (A/B)
1	<u>Juglans nigra</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Celtis occidentalis</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
3	<u>Populus deltoides</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>	
4					
5		<u>80</u>	<u>= Total Cover</u>		Prevalence Index Worksheet Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>50</u> x 3 = <u>150</u> FACU species <u>145</u> x 4 = <u>580</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>195</u> (A) <u>730</u> (B) Prevalence Index = B/A = <u>3.74</u>
Sapling/Shrub stratum (Plot size: <u>15'</u>)					
1	<u>Elaeagnus angustifolia</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Morus alba</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
3					
4					Hydrophytic Vegetation Indicators: _____ Rapid test for hydrophytic vegetation _____ Dominance test is >50% _____ Prevalence index is ≤3.0* _____ Morphological adaptations* (provide supporting data in Remarks or on a separate sheet) _____ Problematic hydrophytic vegetation* (explain) _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic
5		<u>40</u>	<u>= Total Cover</u>		
Herb stratum (Plot size: <u>5'</u>)					
1	<u>Bromus inermis</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
2	<u>Schedonorus arundinaceus</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3	<u>Smilax glauca</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	Hydrophytic vegetation present? <u>N</u>
4	<u>Solidago altissima</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5					
6					
7					
8					Hydrophytic vegetation present? <u>N</u>
9					
10		<u>75</u>	<u>= Total Cover</u>		
Woody vine stratum (Plot size: <u>30'</u>)					
1					
2					Hydrophytic vegetation present? <u>N</u>
3					
4					
5					
6		<u>0</u>	<u>= Total Cover</u>		

Remarks: (Include photo numbers here or on a separate sheet)

Hydrophytic vegetation was not observed.

SOIL

Sampling Point: 3 - Upland

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (Inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc**		
0-10	10YR 3/2	100					silty loam	
10-20	10YR 5/2	75	10YR 4/6	25	C	M	clay	

*Type: C = Concentration, D = Depletion, RM = Reduced Matrix, MS = Masked Sand Grains. **Location: PL = Pore Lining, M = Matrix

Hydric Soil Indicators:

- | | |
|--|--|
| <input type="checkbox"/> Histisol (A1) | <input type="checkbox"/> Sandy Gleyed Matrix (S4) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> 2 cm Muck (A10) | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) | |

Indicators for Problematic Hydric Soils:

- | |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R) |
| <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (explain in remarks) |

*Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric soil present? Y

Remarks:

Hydric soil indicators were observed. Sample site is within the woodlot in the N.W. corner of the intersection. The woodlot is the apparent high point in the landscape and is apparently well drained.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- | |
|--|
| <input type="checkbox"/> Surface Water (A1) |
| <input type="checkbox"/> High Water Table (A2) |
| <input type="checkbox"/> Saturation (A3) |
| <input type="checkbox"/> Water Marks (B1) |
| <input type="checkbox"/> Sediment Deposits (B2) |
| <input type="checkbox"/> Drift Deposits (B3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) |
| <input type="checkbox"/> Iron Deposits (B5) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Water-Stained Leaves (B9) |

- | |
|---|
| <input type="checkbox"/> Aquatic Fauna (B13) |
| <input type="checkbox"/> True Aquatic Plants (B14) |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Gauge or Well Data (D9) |
| <input type="checkbox"/> Other (Explain in Remarks) |

Secondary Indicators (minimum of two required)

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface water present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>0</u>
Water table present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>0</u>
Saturation present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>0</u>

Wetland hydrology present? N

Describe recorded data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hydrology indicators were not observed.

ATTACHMENT

PRELIMINARY JURISDICTIONAL DETERMINATION FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PRELIMINARY JURISDICTIONAL DETERMINATION (JD): May 2, 2018

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Mr. Daniel J. Stevens
DLZ Indiana, LLC
2211 E. Jefferson Blvd.
South Bend, IN 46615
Phone: 574-236-4400

C. DISTRICT OFFICE, FILE NAME, AND NUMBER:

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT
DIFFERENT SITES)**

This project involves the reconstruction of the intersection of 191st Street and Grassy Branch Road as a roundabout in Hamilton County, Indiana. The project is within Sections 29 and 30, Township 19 North, Range 4 East of Hamilton County, Indiana. This is a Hamilton County project (Des. No: 1700731).

State: Indiana County/parish/borough: Hamilton County City: N/A
Center coordinates of site (lat/long in degree decimal format):
Lat.: 40.064949°, Long.: -86.109257°
Universal Transverse Mercator: 16T, 575962.00 m E, 4435346.00 m N
Name of nearest waterbody: Cool Creek

Identify (estimate) amount of waters in the review area:

Non-wetland waters: 100 linear feet: width 13 (ft) and/or 0.03 acres.
Cowardin Class: Riverine
Stream Flow: Perennial
Wetlands: n/a
Cowardin Class: n/a

Name of any water bodies on the site that have been identified as Section 10 waters:

Tidal: N/A
Non-Tidal: N/A

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

- ☐ Office (Desk) Determination. Date:
- ☐ Field Determination. Date(s):

1. The Corps of Engineers believes that there may be jurisdictional waters of the United States on the subject site, and the permit applicant or other affected party who requested this preliminary JD is hereby advised of his or her option to request and obtain an approved jurisdictional determination (JD) for that site. Nevertheless, the permit applicant or other person who requested this preliminary JD has declined to exercise the option to obtain an approved JD in this instance and at this time.

2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an approved JD for the activity, the permit applicant is hereby made aware of the following: (1) the permit applicant has elected to seek a permit authorization based on a preliminary JD, which does not make an official determination of jurisdictional waters; (2) that the applicant has the option to request an approved JD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an approved JD could possibly result in less compensatory mitigation being required or different special conditions; (3) that the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) that the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) that undertaking any activity in reliance upon the subject permit authorization without requesting an approved JD constitutes the applicant's acceptance of the use of the preliminary JD, but that either form of JD will be processed as soon as is practicable; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a preliminary JD constitutes agreement that all wetlands and other water bodies on the site affected in any way by that activity are jurisdictional waters of the United States, and precludes any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an approved JD or a preliminary JD, that JD will be processed as soon as is practicable. Further, an approved JD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331, and that in any administrative appeal, jurisdictional issues can be raised (see 33 C.F.R. 331.5(a)(2)). If, during that administrative appeal, it becomes necessary to make an official determination whether CWA jurisdiction exists over a site, or to provide an official delineation of jurisdictional waters on the site, the Corps will provide an approved JD to accomplish that result, as soon as is practicable.

This preliminary JD finds that there “*may be*” waters of the United States on the subject project site, and identifies all aquatic features on the site that could be affected by the proposed activity, based on the following information:

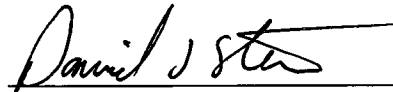
SUPPORTING DATA. Data reviewed for preliminary JD (check all that apply -

checked items should be included in case file and, where checked and requested, appropriately reference sources below):

- X Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: DLZ Indiana, LLC.
- X Data sheets prepared/submitted by or on behalf of the applicant/consultant.
 - ☐ Office concurs with data sheets/delineation report.
 - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters’ study: .
- ☐ U.S. Geological Survey Hydrologic Atlas: .
 - ☐ USGS NHD data.
 - ☐ USGS 8 and 12 digit HUC maps.
- X U.S. Geological Survey map(s). Cite scale & quad name: Noblesville, 1:24,000 scale
- X USDA Natural Resources Conservation Service Soil Survey. Citation: USDA Soil Survey of Hamilton County
- ☒ National wetlands inventory map(s). Cite name: Noblesville.
- ☐ State/Local wetland inventory map(s): .
- ☒ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodetic Vertical Datum of 1929)
- X Photographs: X Aerial (Name & Date): 2017 IndianaMap.
Or X Other (Name & Date): Site Photographs, 11/7/2017.
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Other information (please specify): .

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

Signature and date of
Regulatory Project Manager
(REQUIRED)

 5-2-18

Signature and date of
person requesting preliminary JD
(REQUIRED, unless obtaining
the signature is impracticable)

Site number	Latitude	Longitude	Cowardin Class	Estimated amount of aquatic resource in review area	Class of aquatic resource
Cool Creek	40.060315°	-86.109379°	Riverine	100 linear feet or 0.03 acre	non-section 10 – non-wetland

Appendix F-29

APPENDIX G

Public Involvement



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix G

Sample Notice of Entry for Survey Letter

October 31, 2017

Re: Notice of Survey for a Proposed Roundabout at the Intersection of 191st Street and Grassy Branch Road in Westfield, Indiana

Dear Janice J. Bailey:

Our firm has been retained by the Hamilton County Board of Commissioners to prepare a survey for a proposed roundabout project near Westfield, Indiana at the referenced location.

Our information indicates that you either own or occupy property near this proposed project. Our employees will be conducting a survey of the project area in the near future. It may be necessary for them to come onto your property to complete this work. This is allowed by law pursuant to Indiana Code IC 8-23-7-26. Our employees will identify themselves, if you are available, before coming onto your property to perform their work. If you have sold this property, or it is occupied by someone else, please provide DLZ the name and address of the new owner or current occupant so that we may contact them about the survey.

At this stage, we generally do not know what impact, if any, this project may eventually have on your property. If it is determined later that your property is impacted, the Hamilton County Highway Department will contact you with additional information.

The survey work will include mapping the location of features such as buildings, trees, fences, drives, property evidence, ground elevations, stream sections, and trail details, etc. The survey is needed for the proper planning and design of this road improvement project. Please be assured of our sincere desire to cause you as little inconvenience as possible during the course of our work. If any problems do occur as a result of our survey work, please contact our field crew or myself at the address listed below.

If you have questions regarding other issues related to this proposed project please contact DLZ Project Manager in the DLZ Indianapolis office at (317) 633-4120.

In the event that damage to your property should occur as a result of our work you may request compensation for said damages. A copy of IC-8-23-7-26 thru 28 is provided to help with your

understanding of the process. In accordance with IC 8-23-7-28, any request for damages shall be made in writing to the Hamilton County Commissioners, One Hamilton County, Noblesville, IN 46060.

Very truly yours,

DLZ INDIANA, LLC

A handwritten signature in black ink, appearing to read "Alan B. Cleveland", is written over a horizontal line.

Alan B. Cleveland
Consultant Surveyor

Attachments: as noted

APPENDIX H

Air Quality



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix H



Indianapolis Metropolitan Planning Organization

Planning the Transportation Future for the Indianapolis Region

Project Overview

Funding History

Amendment History

<<Go Back

191st St & Grassy Branch Rd Roundabout (1700731)

<i>Des Number</i>	1700731	<i>Amendment</i>	20-00 IRTIP	<i>Exempt Category</i>	Exempt	<i>Est Total Project Cost</i>	\$3,260,000
<i>Lead Agency</i>	Hamilton County	<i>Contact (ERC)</i>	Bradley Davis 3177737770	<i>INDOT District</i>	Greenfield	<i>County</i>	Hamilton Hamilton Co.
<i>Project Type</i>	Intersection or Intersection Groups	<i>Letting Date</i>	08/11/2021	<i>Functional Classification</i>	Major Collector	<i>Bike/Ped Component(s)</i>	Yes 7%
<i>Title</i>	191st St & Grassy Branch Rd Roundabout						
<i>Limits</i>	Primary Crossstreet: 191st St, Secondary Crossstreet: Grassy Branch Rd						
<i>Description</i>	This project will replace the existing four way stop at 191st St/Grassy Branch Rd with a modern roundabout to provide for more efficient traffic flow/congestion relief and air quality improvements.						

Phase	Fund Source	Prior SFY	SFY2020	SFY2021	SFY2022	SFY2023	SFY2024	Future SFY	Total
PE	LOCAL - Other	\$335,000	-	-	-	-	-	-	\$335,000
<i>Total Preliminary Engineering</i>		\$335,000	-	-	-	-	-	-	\$335,000
RW	LOCAL - Other	-	\$180,000	-	-	-	-	-	\$180,000
<i>Total Right of Way</i>		-	\$180,000	-	-	-	-	-	\$180,000
CN	FEDERAL - CMAQ	-	-	-	\$1,952,000	-	-	-	\$1,952,000
CN	LOCAL - Other	-	-	-	\$488,000	-	-	-	\$488,000
<i>Total Construction</i>		-	-	-	\$2,440,000	-	-	-	\$2,440,000
CE	FEDERAL - CMAQ	-	-	-	\$244,000	-	-	-	\$244,000
CE	LOCAL - Other	-	-	-	\$61,000	-	-	-	\$61,000
<i>Total Construction Engineering</i>		-	-	-	\$305,000	-	-	-	\$305,000
<i>Total Programmed</i>		\$335,000	\$180,000	-	\$2,745,000	-	-	-	\$3,260,000

Indiana Department of Transportation (INDOT)
State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTR ACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
Fishers	40281 / 1700723	Init.	MS 1001	Bike/Pedestrian Facilities	Geist Greenway - Phase 1A	Greenfield	0	STPBG		Indianapolis MPO	CN	\$1,520,600.00	\$0.00	\$1,520,600.00				
										Local Funds	CN	\$0.00	\$617,750.00	\$617,750.00				
Fishers	40282 / 1700722	Init.	ST 1103	Intersection Improvement, Roundabout	Intersection Improvement roundabout at Southeastern Pkwy & Cyntheanne Rd	Greenfield	0	STPBG		Indianapolis MPO	CN	\$2,261,250.00	\$0.00		\$2,261,250.00			
										Local Funds	CN	\$0.00	\$565,313.00		\$565,313.00			
										Local Funds	RW	\$0.00	\$130,000.00	\$130,000.00				
Fishers	40282 / 1700722	M 02	ST 1103	Intersection Improvement, Roundabout	Intersection Improvement roundabout at Southeastern Pkwy & Cyntheanne Rd	Greenfield	0	CMAQ	\$3,033,725.00	Demonstration Fund Program	RW	\$61,730.00	\$0.00	\$61,730.00				
										Local Funds	RW	\$0.00	\$145,432.00	\$145,432.00				
Comments:Resolution Number 19-IMPO-006 dated 5/22/2019 - moved RW from FY 19 to FY 20																		
Westfield	40284 / 1700728	Init.	ST 1104	New Road Construction, HMA	East St. N Ext. from East St at 196th St to SR 38 at Anthony Rd	Greenfield	1.3	STPBG		Indianapolis MPO	CN	\$5,512,500.00	\$0.00		\$5,512,500.00			
										Local Funds	CN	\$0.00	\$1,378,125.00		\$1,378,125.00			
Westfield	40284 / 1700728	M 02	ST 1104	New Road Construction, HMA	East St. N Ext. from East St at 196th St to SR 38 at Anthony Rd	Greenfield	1.3	STBG	\$9,432,140.00	Indianapolis MPO	CN	\$1,194,800.00	\$0.00		\$1,194,800.00			
										Local Funds	CN	\$0.00	\$1,346,715.00		\$1,346,715.00			
Comments:Resolution Number 19-IMPO-006 Dated 5/22/2019 - Increased CN/CE funds in FY 21																		
Westfield	40285 / 1700729	Init.	ST 1076	Intersection Improvement, Roundabout	161st and Union Street intersection - roundabout	Greenfield	0	STPBG		Indianapolis MPO	CN	\$2,268,000.00	\$0.00			\$2,268,000.00		
										Local Funds	CN	\$0.00	\$567,000.00			\$567,000.00		
Hamilton County	40286 / 1700731	Init.	ST 1105	Intersection Improvement, Roundabout	1000' on 191st St & 900' on Grassy Branch Rd - roundabout	Greenfield	0	STPBG		Indianapolis MPO	CN	\$2,196,000.00	\$0.00			\$2,196,000.00		
										Local Funds	CN	\$0.00	\$549,000.00			\$549,000.00		
										Local Funds	RW	\$0.00	\$180,000.00	\$180,000.00				
Noblesville	40302 / 1700738	Init.	ST 1106	Bike/Pedestrian Facilities	Allisonville Rd multi-use path (S - 10th Street) from Wellington Pkwy to Greenfield Ave	Greenfield	0	STPBG		Indianapolis MPO	CN	\$2,161,258.00	\$0.00			\$2,161,258.00		
										Local Funds	CN	\$0.00	\$690,315.00			\$690,315.00		

*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.



U.S. Department
of Transportation

Federal Transit Administration
Region V
200 West Adams St., Suite 320
Chicago, IL 60606-5253

Federal Highway Administration
Indiana Division
575 N. Pennsylvania St., Rm 254
Indianapolis, IN 46204-1576

July 2, 2019

Joe McGuinness
Commissioner
Indiana Department of Transportation
100 N Senate Ave. N955
Indianapolis, IN 46204

Dear Mr. McGuinness:

This letter documents the Federal Highway Administration (FHWA) and the Federal Transit Administration's (FTA) review of Indiana's State Fiscal Year 2020-2024 Statewide Transportation Improvement Program (STIP) and the Federal Planning Finding as required under 23 CFR 450.220(b).

In order to approve the STIP document, including the Metropolitan Planning Organization (MPO) Transportation Improvement Programs (TIPs) contained by reference or directly incorporated into the STIP, FHWA and FTA must determine, through a Federal Planning Finding, that each MPO TIP is based on a continuing, cooperative, and comprehensive (3-C) planning process. In addition, the Federal Planning Finding is based upon the extent that all the projects in the STIP are the result of a planning process in accordance with 23 USC 134 & 135 and 49 USC 5303 & 5304.

FHWA and FTA have identified the following strengths of the statewide and metropolitan transportation planning processes:

- The Indiana Department of Transportation (INDOT), MPOs and transit operators worked together to establish performance measures and targets. They established routine meetings between key INDOT and MPO staff on the safety, congestion, freight, bridge, pavement, and other measures. Subcommittees were formed between INDOT, the MPOs and FHWA. INDOT incorporated the performance measures into the 2045 Long-Range Statewide Transportation Plan (LRTP), STIP and Transportation Asset Management Plan (TAMP). All but one of the MPOs adopted INDOT's performance measures targets.
- The various performance measure subcommittees developed written procedures that were adopted into INDOT's Planning Roles and Responsibilities Cooperation Operation Manual (PRRCOM). The procedures addressed how to develop and share information related to the transportation performance data, the selection of performance targets, the reporting of performance targets, the reporting of performance to be used in tracking the progress toward attainment of critical outcomes for the regions of the MPOs, and the collection of data for the state asset management plan for the National Highway System.

- INDOT held regional meetings with the MPOs and Rural Planning Organizations (RPOs) in the development of its 2045 LRTP and FY 2020-2024 STIP during late fall 2017 through early 2018.
- INDOT increased its public outreach methods by hosting a virtual town hall meeting on transportation needs as part of input into the 2045 LRTP and the STIP. INDOT employed an on-line community survey that resulted in increased feedback and expanded the number of public meetings locations on the LRTP and STIP. Finally, INDOT created a QR Scanner app for the LRTP and STIP that linked these documents for interested persons to view electronically.
- The MPOs, INDOT, US Environmental Protection Agency, Indiana Department of Environmental Management, FTA and FHWA effectively collaborated to meet the requirements of the 1997 ozone standards.

FHWA and FTA also identified the following areas for improvement in the statewide and metropolitan transportation planning processes:

- INDOT needs to ensure projects selected by its Mobility Asset Management Team are provided earlier to the Transportation Management Areas (TMAs) MPOs for analysis in Congestion Management Process (CMP) and inclusion in the MPO's MTP.
- INDOT needs to ensure staff is knowledgeable of and fulfilling its responsibilities per the FHWA and INDOT Stewardship and Oversight Agreement and the PRRCOM. It is important INDOT follow these documents in conducting its oversight of the statewide and metropolitan planning processes.

FHWA and FTA will follow up with our observations leading to the above areas for improvement and work with you on how to best address them. In the meantime, we offer the following suggestions as possible approaches for improving the statewide and metropolitan transportation planning processes:

- We recommend INDOT work in coordination with FHWA and FTA to establish reoccurring staff and management level meetings to discuss state and federal policies, practices, procedures, and internal controls to ensure adequate stewardship and oversight of the transportation planning process in Indiana.
- We also encourage INDOT to explore and take advantage of opportunities for enhanced technical assistance, such as National Highway Institute and National Transit Institute courses on statewide and metropolitan planning and other related topics, peer exchanges, and other Transportation Planning Capacity Building program opportunities, which can be found at <https://planning.dot.gov/>.

This letter constitutes the documented Federal Planning Finding for Indiana's planning process. Based on our review of the information provided, including fiscal constraint information, air

quality determinations, public involvement, and the statewide and MPO planning certifications, FHWA and FTA approves Indiana's fiscal years 2020-2023 of the FY 2020-2024 STIP. We consider the projects in the 5th year for informational purposes as our approval is not to exceed more than four years per 23 CFR 450.218(l).

If you have any questions, please feel free to contact Joyce Newland with FHWA at (317) 226-5353 / joyce.newland@dot.gov or Cecilia Crenshaw with FTA at (312) 705-1268 / cecilia.crenshaw@dot.gov.

Sincerely,



Kelley Brookins
Regional Administrator
FTA Region V

Sincerely,



Mayela Sosa
Division Administrator
FHWA Indiana Division

cc: (transmitted by e-mail)
Brad Steckler, INDOT
Roy Nunnally, INDOT
Karen Hicks, INDOT
Jay Mitchell, INDOT

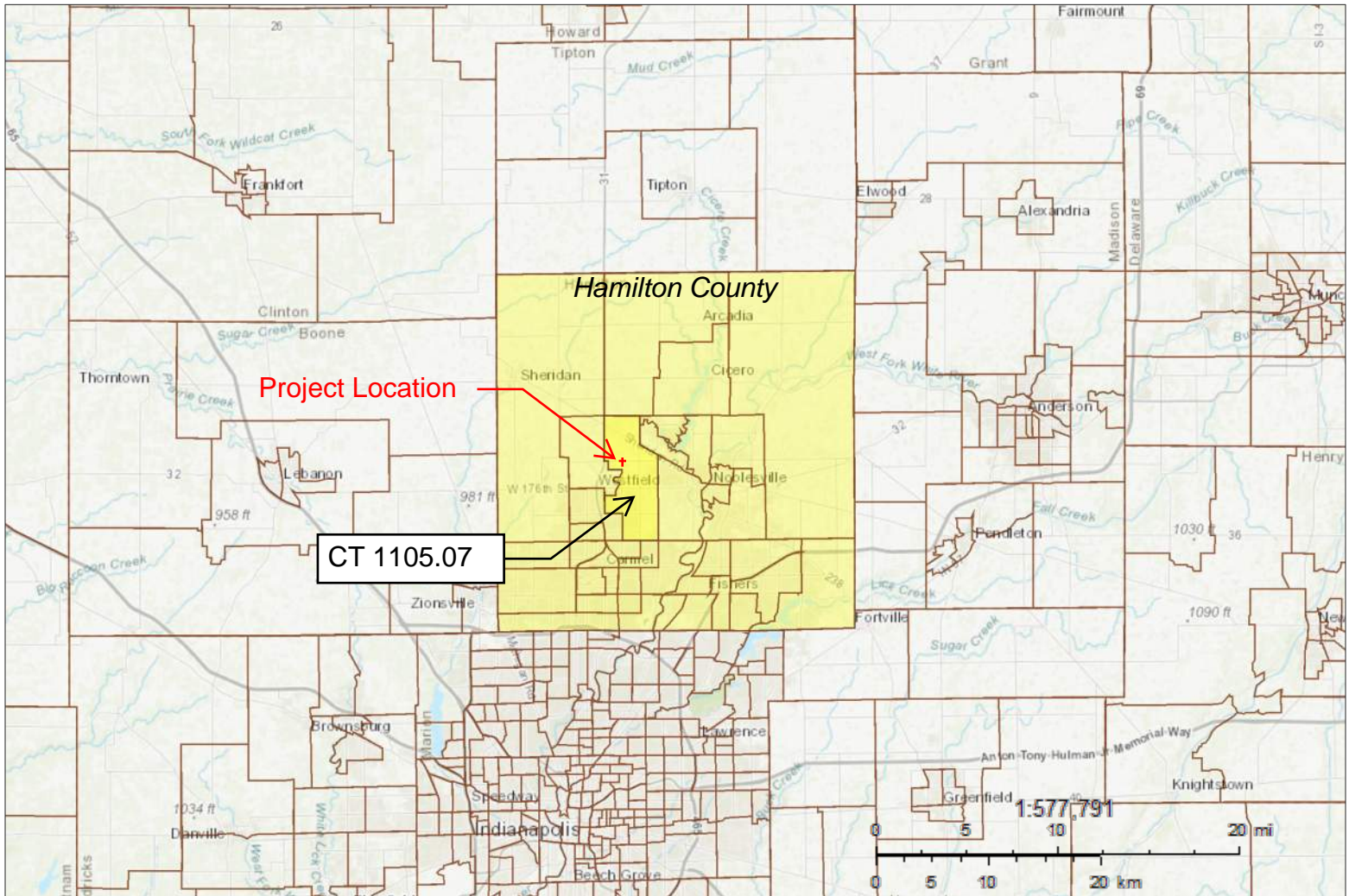
APPENDIX I

Environmental Justice Documentation



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix I



Legend

Your Selections

- 2017 boundaries were used to map 'Your Selections'

Selection Results

No Legend

Boundaries

No Legend

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

	Hamilton County, Indiana		Census Tract 1105.07,	
	Estimate	Margin of	Estimate	Margin of
Total:	309,687	*****	13,557	+/-681
Not Hispanic or Latino:	297,847	*****	13,136	+/-679
White alone	261,564	+/-334	12,206	+/-727
Black or African American alone	11,141	+/-610	570	+/-449
American Indian and Alaska Native	439	+/-173	0	+/-18
Asian alone	17,799	+/-547	183	+/-130
Native Hawaiian and Other Pacific	9	+/-16	0	+/-18
Some other race alone	605	+/-350	0	+/-18
Two or more races:	6,290	+/-897	177	+/-169
Two races including Some other race	341	+/-230	0	+/-18
Two races excluding Some other	5,949	+/-852	177	+/-169
Hispanic or Latino:	11,840	*****	421	+/-98
White alone	9,031	+/-600	212	+/-158
Black or African American alone	103	+/-74	0	+/-18
American Indian and Alaska Native	16	+/-25	0	+/-18
Asian alone	134	+/-118	0	+/-18
Native Hawaiian and Other Pacific	0	+/-27	0	+/-18
Some other race alone	1,922	+/-553	146	+/-165
Two or more races:	634	+/-270	63	+/-91
Two races including Some other race	358	+/-201	45	+/-84
Two races excluding Some other	276	+/-166	18	+/-30

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error

(for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

While the 2013-2017 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error.

A statistical test is not appropriate.

2. An '-' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.

3. An '-' following a median estimate means the median falls in the lowest interval of an open-ended distribution.

4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.

5. An '****' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.

6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.

7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be

displayed because the number of sample cases is too small.

8. An '(X)' means that the estimate is not applicable or not available.

Population for whom poverty status is determined

2013-2017 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

	Hamilton County, Indiana		Census Tract 1105.07,	
	Estimate	Margin of	Estimate	Margin of
Total:	307,705	+/-379	13,557	+/-681
Income in the past 12 months below	15,322	+/-1,560	477	+/-354
Male:	6,407	+/-799	170	+/-113
Under 5 years	466	+/-147	0	+/-18
5 years	196	+/-99	0	+/-18
6 to 11 years	1,271	+/-380	0	+/-18
12 to 14 years	493	+/-190	32	+/-49
15 years	119	+/-69	0	+/-18
16 and 17 years	136	+/-94	0	+/-18
18 to 24 years	587	+/-224	0	+/-18
25 to 34 years	612	+/-199	61	+/-66
35 to 44 years	970	+/-235	77	+/-87
45 to 54 years	759	+/-214	0	+/-18
55 to 64 years	489	+/-163	0	+/-18
65 to 74 years	171	+/-81	0	+/-18
75 years and over	138	+/-100	0	+/-18
Female:	8,915	+/-940	307	+/-257
Under 5 years	468	+/-169	0	+/-18
5 years	253	+/-164	0	+/-18
6 to 11 years	731	+/-211	0	+/-18
12 to 14 years	399	+/-159	65	+/-74
15 years	173	+/-102	33	+/-52
16 and 17 years	300	+/-136	0	+/-18
18 to 24 years	1,096	+/-265	85	+/-95
25 to 34 years	1,547	+/-240	0	+/-18
35 to 44 years	1,249	+/-265	101	+/-90
45 to 54 years	1,065	+/-263	0	+/-18
55 to 64 years	865	+/-253	0	+/-18
65 to 74 years	406	+/-148	23	+/-38
75 years and over	363	+/-135	0	+/-18
Income in the past 12 months at or	292,383	+/-1,618	13,080	+/-708
Male:	143,870	+/-843	5,896	+/-453
Under 5 years	10,434	+/-154	467	+/-150
5 years	2,314	+/-350	79	+/-70
6 to 11 years	14,318	+/-645	373	+/-149
12 to 14 years	6,941	+/-594	259	+/-139
15 years	3,050	+/-359	110	+/-96
16 and 17 years	4,237	+/-344	85	+/-77
18 to 24 years	10,941	+/-225	449	+/-265
25 to 34 years	17,128	+/-203	772	+/-213
35 to 44 years	21,925	+/-259	923	+/-208
45 to 54 years	22,023	+/-217	1,072	+/-222
55 to 64 years	16,006	+/-187	651	+/-230
65 to 74 years	9,649	+/-194	485	+/-111
75 years and over	4,904	+/-192	171	+/-91

Female:	148,513	+/-1,037	7,184	+/-490
Under 5 years	9,956	+/-181	493	+/-185
5 years	2,564	+/-389	141	+/-110
6 to 11 years	13,607	+/-622	893	+/-227
12 to 14 years	7,328	+/-559	375	+/-170
15 years	2,461	+/-324	149	+/-149
16 and 17 years	4,459	+/-357	212	+/-106
18 to 24 years	9,802	+/-262	469	+/-199
25 to 34 years	18,117	+/-235	919	+/-254
35 to 44 years	23,114	+/-297	973	+/-227
45 to 54 years	22,595	+/-275	1,066	+/-195
55 to 64 years	17,058	+/-295	631	+/-216
65 to 74 years	10,596	+/-241	681	+/-144
75 years and over	6,856	+/-229	182	+/-92

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

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Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2013-2017 American Community Survey 5-Year Estimates

Explanation of Symbols:

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8. An '(X)' means that the estimate is not applicable or not available.

APPENDIX J

Additional Studies:

J1: List of LWCF Properties in Hamilton County

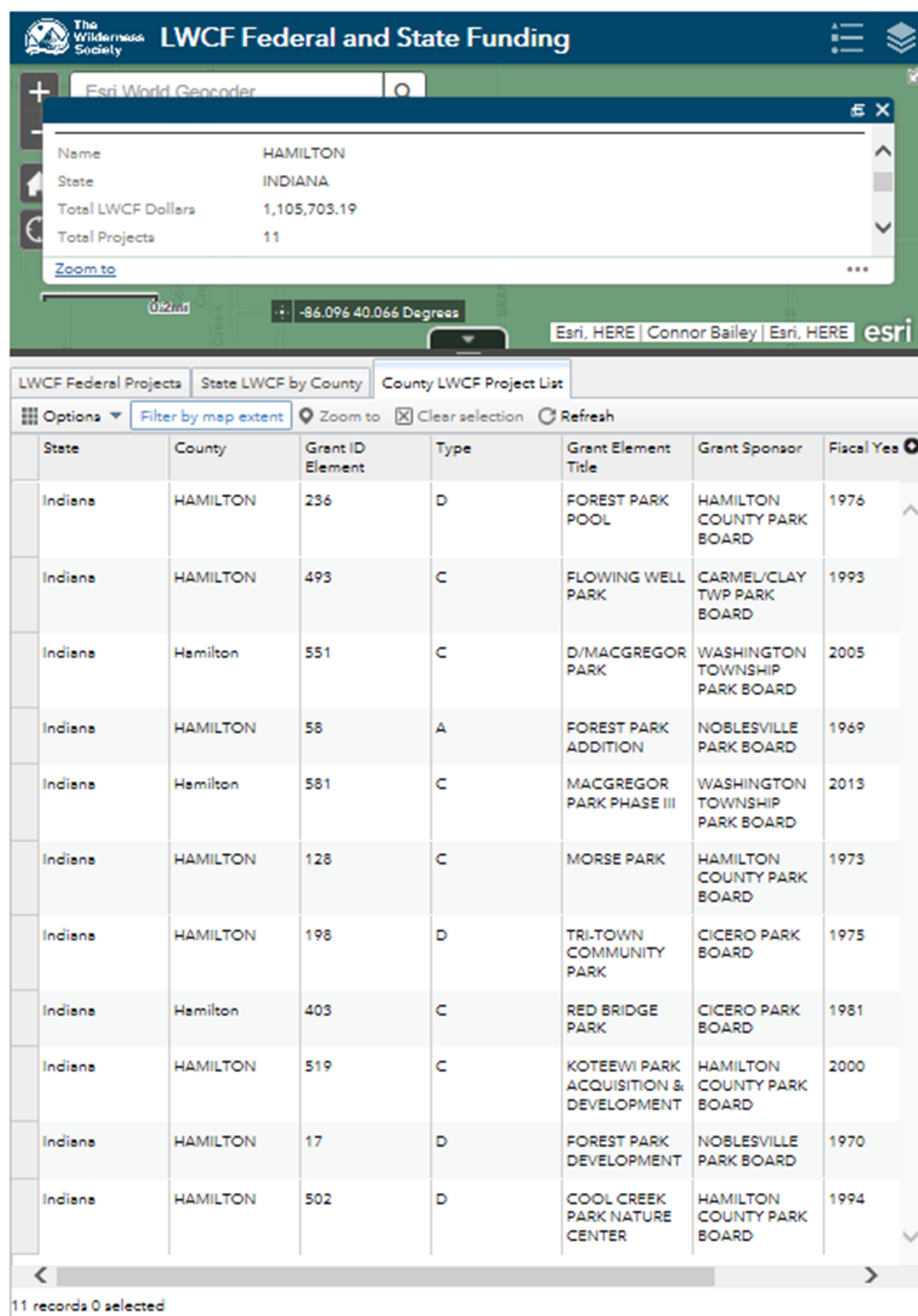
J2: CMAQ Traffic Analysis



191st Street/Grassy Branch Road
Intersection Improvements
Des. No.: 1700731
Hamilton County, Indiana

Appendix J

MAP OF LWCF FUNDING THROUGH FEDERAL LAND MANAGEMENT AGENCIES AND STATE & LOCAL ASSISTANCE PROGRAM.





AMERICAN
STRUCTUREPOINT
INC.

7260 Shadeland Station, Indianapolis, Indiana 46256
TEL 317.547.5580 FAX 317.543.0270

www.structurepoint.com

M E M O R A N D U M

DATE: November 21, 2016
TO: Mr. Brad Davis, PE
FROM: Jeromy Grenard, PE, PTOE
RE: 191st Street and Grassy Branch Road - CMAQ Analysis
CC: Ken Olson

This CMAQ application is for traffic flow improvements at the intersection of 191st Street and Grassy Branch Road, which is an all-way stop controlled intersection. Grassy Branch Road is a two-lane (one lane each direction) north/south major collector as it intersects with 191st Street, which is a two-lane (one lane each direction) east/west major collector. The intersection is located 1.5 miles east of Grand Park in Westfield, IN, and 1 mile east of the interchange of US 31 and 191st Street. The proximity of this intersection to the US 31 interchange is anticipated to attract more traffic to use this intersection to/from US 31. A traffic analysis was performed to evaluate the traffic operations at the subject intersection for the opening year 2022 and the design year 2042.

The proposed project would construct a single-lane roundabout intersection that is easily expandable to a multi-lane roundabout should it be necessary in the future. This improvement will improve the traffic flow for local commuters by reducing the delay, congestion and emissions.

Traffic Data

2016 daily traffic counts were provided for each of the intersection approach legs. Intersection turning movement counts were calculated based on the following assumptions:

- DHV = 10% of ADT
- Directional factors are 60%/40%
- Turning movements are proportional to the ADT on each approach

Traffic volumes for the year 2022 and year 2042 were forecasted using a background growth rate of 2.5% per year, considering that there is some growth potential to happen in the vicinity of the subject intersection due to the proximity to the 191st Street interchange on US 31. The traffic data calculations are provided in an appendix.

Capacity Analysis

A capacity analysis has been performed in order to evaluate the traffic operations at the intersection during the opening year 2022 and the design year 2042. The capacity analysis is based on the methodology outlined in the Highway Capacity Manual (TRB 2010). The standard parameter used to evaluate traffic operating conditions is referred to as the level-of-service (LOS). There are six LOS (A through F) which relate to driving conditions from best to worst, respectively. LOS for unsignalized intersections is defined in terms of control delay per vehicle, which is a direct correlation to driver discomfort, frustration, fuel consumption, and lost travel time.

To facilitate the intersection analyses, Synchro 9 and Sidra 7 software packages were used. The capacity analysis output includes the average vehicle control delay, LOS, and 95th percentile (or maximum) queue length. These software outputs are included in an appendix. The results from the capacity analysis are summarized in **Table 1**.

Table 1 – LOS and Delay Results: 191st Street and Grassy Branch Road

Intersection Control Type	Approach	2016 Peak Hour		2022 Peak Hour		2042 Peak Hour	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
AWSC	NB	15.1	C	17.8	C	46.0	E
	SB	12.8	B	14.4	B	23.8	C
	EB	54.5	F	133.2	F	597.1	F
	WB	17.3	C	23.4	C	141.6	F
	Overall	34.1	D	73.6	F	327.5	F
Roundabout	NB			11.4	B	22.6	C
	SB			9.2	A	10.8	B
	EB			7.6	A	14.5	B
	WB			8.1	A	10.8	B
	Overall			8.5	A	14.6	B

Proposed Lane Configurations

The existing all-way stop control intersection at 191st Street and Grassy Branch Road will operate at an unacceptable level of service during opening day (2022) and design year (2042), and will operate at an acceptable level of service with single-lane roundabout control. Because the proposed single-lane roundabout begins to experience delay on the south approach as the design year, it is advisable to construct a single-lane roundabout that is easily expandable to a two-lane configuration as the traffic demand dictates.

Cost Estimate

A preliminary cost estimate was prepared for the multilane roundabout and is provided in an appendix. The cost of this roundabout is estimated at \$2,438,000 excluding right of way acquisition costs and engineering design costs. The CMAQ funding being requested is \$2,196,000.

Emissions Calculations

The single lane roundabout is expected to reduce greenhouse gas emissions associated with the subject intersection. To measure this reduction, emissions have been calculated for the all-way stop control intersection (as before) and the roundabout (as after) scenario using an emission calculation spreadsheet provided by Indianapolis MPO. The summary calculations, which are provided in an appendix, indicate the roundabout will result in fewer greenhouse gas emissions than the all-way stop control intersection type.

The no-build peak hour delay is based upon input with the analyzed PM peak hour for all-way stop control and roundabout delays. **Table 2** shows the total daily change in each emission parameter and the estimated cost benefit for this project as required for the CMAQ application.

Table 2 – Emission Reduction Summary

	VOC	NOx	CO	PM-2.5	PM-NOx
kg/yr change (- for reduction)	-107.53	-79.248	-645.551	-3.092	-43.669
Design life (yrs)	20				
CMAQ funding requested	\$2,196,000				
kg/life of project (- for reduction)	-2150.60	-1584.96	-12911.02	-61.84	-873.38
CMAQ \$ / kg reduced	\$1,021.11	\$1,385.52	\$170.09	\$35,511.00	\$2,514.37

List of Appendices

Appendix – Traffic Data

Appendix – Capacity Analysis Reports

Appendix – Conceptual Layout

Appendix – Cost Estimate

Appendix – Emission Reduction Calculations

Approach Traffic Summary

Year	Approach AADT				Approach DHV			
	N	S	E	W	N	S	E	W
2016	3,080	3,422	7,419	9,328	308	342	742	933
2022	3,540	3,940	8,530	10,730	350	390	850	1,070
2042	5,080	5,650	12,240	15,390	510	560	1,220	1,540

Assumptions

Annual growth rate = 2.5%

K factor = 0.10

Turning Movement Estimation - 2016

Year	Intersection	NB			SB			EB			WB		
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
2016	191st St and Grassy Branch Rd	96	33	76	46	21	57	123	297	140	65	175	56

East Leg	West Leg	North Leg	South Leg
WB (DHV)	EB (DHV)	SB (DHV)	NB (DHV)
297	560	123	205

Intersection	Leg	Direction	1-Way DHV
191st St and Grassy Branch Rd	N	NB	185
		SB	173
	S	NB	205
		SB	157
	E	EB	445
		WB	297
	W	EB	560
		WB	379

Leg	2-Way DHV
E	742
W	833
N	308
S	342

Directional Splits											
WBL	WBT	WBR	EBL	EBT	EBR	SBL	SBT	SBR	NBL	NBT	NBR
22%	59%	19%	22%	59%	25%	37%	17%	46%	42%	16%	37%

Notes
 DHV derived using K/O Factors (0.10, 60/40)
 Assumed 2.5% linear background growth

Turning Movement Estimation - 2022

Year	Intersection	NB			SB			EB			WB			East Leg	West Leg	North Leg	South Leg
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	WB (DHV)	EB (DHV)	SB (DHV)	NB (DHV)
2022	191st St and Grassy Branch Rd	110	35	87	52	24	64	141	340	161	75	201	65	340	642	140	234

Intersection	Leg	Direction	1-Way DHV
191st St and Grassy Branch Rd	N	NB	210
		SB	140
		NB	234
	S	SB	156
		EB	510
		WB	340
	E	EB	642
		WB	428

Leg	2-Way DHV
E	850
W	1,070
N	350
S	390

Directional Splits											
WBL	WBT	WBR	EBL	EBT	EBR	SBL	SBT	SBR	NBL	NBT	NBR
22%	56%	19%	22%	53%	25%	37%	17%	46%	42%	15%	37%

Notes
DHV derived using K/D Factors (0.10, 60/40)
Assumed 2.5% linear background growth

Turning Movement Estimation - 2042

Year	Intersection	NB			SB			EB			WB			East Leg	West Leg	North Leg	South Leg
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	WB (DHV)	EB (DHV)	SB (DHV)	NB (DHV)
2042	191st St and Grassy Branch Rd	158	54	124	75	35	94	203	490	222	102	288	98	488	924	204	336

Intersection	Leg	Direction	1-Way DHV
191st St and Grassy Branch Rd	N	NB	306
		SB	204
	S	NB	338
		SB	224
	E	EB	222
		WB	488
	W	EB	924
		WB	616

Leg	2-Way DHV
E	1,230
W	1,540
N	510
S	560

Directional Splits											
WBL	WBT	WBR	EBL	EBT	EBR	SBL	SBT	SBR	NBL	NBT	NBR
21%	59%	20%	22%	53%	24%	37%	37%	46%	47%	16%	37%

Notes
DHV derived using K/D Factors (0.10, 60/40)
Assumed 2.5% linear background growth

ALL-WAY STOP CONTROL ANALYSIS								
General Information					Site Information			
Analyst	JLG				Intersection	191st St & Grassy Branch Rd		
Agency/Co.	American Structurepoint, Inc.				Jurisdiction	City of Westfield		
Date Performed	11/21/2016				Analysis Year	2016		
Analysis Time Period	Peak Hour							
Project ID								
East/West Street: 191st St					North/South Street: Grassy Branch Rd			
Volume Adjustments and Site Characteristics								
Approach	Eastbound				Westbound			
Movement	L	T	R		L	T	R	
Volume (veh/h)	123	297	140		65	175	56	
%Thrus Left Lane								
Approach	Northbound				Southbound			
Movement	L	T	R		L	T	R	
Volume (veh/h)	96	33	76		46	21	57	
%Thrus Left Lane								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.92		0.92		0.92		0.92	
Flow Rate (veh/h)	607		320		221		132	
% Heavy Vehicles	2		2		2		2	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							
Saturation Headway Adjustment Worksheet								
Prop. Left-Turns	0.2		0.2		0.5		0.4	
Prop. Right-Turns	0.3		0.2		0.4		0.5	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		-0.0		-0.1		-0.2	
Departure Headway and Service Time								
hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.54		0.28		0.20		0.12	
hd, final value (s)	5.80		6.35		6.97		7.23	
x, final value	0.978		0.565		0.428		0.265	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t _s (s)	3.8		4.4		5.0		5.2	
Capacity and Level of Service								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	619		571		514		489	
Delay (s/veh)	54.5		17.3		15.1		12.8	
LOS	F		C		C		B	
Approach: Delay (s/veh)	54.5		17.3		15.1		12.8	
LOS	F		C		C		B	
Intersection Delay (s/veh)	34.1							
Intersection LOS	D							

ALL-WAY STOP CONTROL ANALYSIS								
General Information					Site Information			
Analyst	GMG				Intersection	191st St & Grassy Branch Rd		
Agency/Co.	American Structurepoint, Inc.				Jurisdiction	City of Westfield		
Date Performed	11/21/2016				Analysis Year	2022		
Analysis Time Period	Peak Hour							
Project ID								
East/West Street: 191st St					North/South Street: Grassy Branch Rd			
Volume Adjustments and Site Characteristics								
Approach	Eastbound			Westbound				
Movement	L	T	R	L	T	R		
Volume (veh/h)	141	340	161	75	201	65		
%Thrus Left Lane								
Approach	Northbound			Southbound				
Movement	L	T	R	L	T	R		
Volume (veh/h)	110	35	87	52	24	64		
%Thrus Left Lane								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.92		0.92		0.92		0.92	
Flow Rate (veh/h)	696		369		251		151	
% Heavy Vehicles	2		2		2		2	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							
Saturation Headway Adjustment Worksheet								
Prop. Left-Turns	0.2		0.2		0.5		0.4	
Prop. Right-Turns	0.3		0.2		0.4		0.5	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		-0.0		-0.1		-0.2	
Departure Headway and Service Time								
hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.62		0.33		0.22		0.13	
hd, final value (s)	6.28		6.74		7.35		7.71	
x, final value	1.21		0.69		0.51		0.32	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t _s (s)	4.3		4.7		5.4		5.7	
Capacity and Level of Service								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	696		520		465		401	
Delay (s/veh)	133.23		23.44		17.83		14.35	
LOS	F		C		C		B	
Approach: Delay (s/veh)	133.23		23.44		17.83		14.35	
LOS	F		C		C		B	
Intersection Delay (s/veh)	73.64							
Intersection LOS	F							

ALL-WAY STOP CONTROL ANALYSIS								
General Information					Site Information			
Analyst	GMG				Intersection	191st St & Grassy Branch Rd		
Agency/Co.	American Structurepoint, Inc.				Jurisdiction	City of Westfield		
Date Performed	11/21/2016				Analysis Year	2042		
Analysis Time Period	Peak Hour							
Project ID								
East/West Street: 191st St					North/South Street: Grassy Branch Rd			
Volume Adjustments and Site Characteristics								
Approach	Eastbound				Westbound			
Movement	L	T	R		L	T	R	
Volume (veh/h)	203	490	222		102	288	98	
%Thrus Left Lane								
Approach	Northbound				Southbound			
Movement	L	T	R		L	T	R	
Volume (veh/h)	158	54	124		75	35	94	
%Thrus Left Lane								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.92		0.92		0.92		0.92	
Flow Rate (veh/h)	993		529		363		221	
% Heavy Vehicles	2		2		2		2	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							
Saturation Headway Adjustment Worksheet								
Prop. Left-Turns	0.2		0.2		0.5		0.4	
Prop. Right-Turns	0.2		0.2		0.4		0.5	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	-0.1		-0.0		-0.1		-0.2	
Departure Headway and Service Time								
hd, initial value (s)	3.20		3.20		3.20		3.20	
x, initial	0.88		0.47		0.32		0.20	
hd, final value (s)	8.23		8.25		8.55		9.27	
x, final value	2.27		1.21		0.86		0.57	
Move-up time, m (s)	2.0		2.0		2.0		2.0	
Service Time, t _s (s)	6.2		6.3		6.6		7.3	
Capacity and Level of Service								
	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	993		529		418		376	
Delay (s/veh)	597.08		141.56		46.04		23.80	
LOS	F		F		E		C	
Approach: Delay (s/veh)	597.08		141.56		46.04		23.80	
LOS	F		F		E		C	
Intersection Delay (s/veh)	327.52							
Intersection LOS	F							

MOVEMENT SUMMARY

 **Site: 191st St & Grassy Branch Rd - 2022**

191st & Grassy Branch - 2022 Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Grassy Branch Rd											
3	L2	120	2.0	0.306	14.4	LOS B	2.1	55.1	0.76	0.80	36.2
8	T1	38	2.0	0.306	8.7	LOS A	2.1	55.1	0.76	0.80	36.4
18	R2	95	2.0	0.306	8.6	LOS A	2.1	55.1	0.76	0.80	35.4
Approach		252	2.0	0.306	11.4	LOS B	2.1	55.1	0.76	0.80	36.0
East: 191st St											
1	L2	82	2.0	0.348	12.6	LOS B	2.4	62.2	0.59	0.66	37.7
6	T1	218	2.0	0.348	6.9	LOS A	2.4	62.2	0.59	0.66	37.9
16	R2	71	2.0	0.348	6.8	LOS A	2.4	62.2	0.59	0.66	36.8
Approach		371	2.0	0.348	8.1	LOS A	2.4	62.2	0.59	0.66	37.6
North: Grassy Branch Rd											
7	L2	57	2.0	0.157	12.9	LOS B	1.0	24.8	0.60	0.69	37.4
4	T1	26	2.0	0.157	7.2	LOS A	1.0	24.8	0.60	0.69	37.6
14	R2	70	2.0	0.157	7.1	LOS A	1.0	24.8	0.60	0.69	36.5
Approach		152	2.0	0.157	9.2	LOS A	1.0	24.8	0.60	0.69	37.0
West: 191st St											
5	L2	153	2.0	0.575	12.1	LOS B	5.2	136.1	0.58	0.60	37.8
2	T1	370	2.0	0.575	6.4	LOS A	5.2	136.1	0.58	0.60	38.0
12	R2	175	2.0	0.575	6.3	LOS A	5.2	136.1	0.58	0.60	36.9
Approach		698	2.0	0.575	7.6	LOS A	5.2	136.1	0.58	0.60	37.7
All Vehicles		1473	2.0	0.575	8.5	LOS A	5.2	136.1	0.61	0.66	37.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

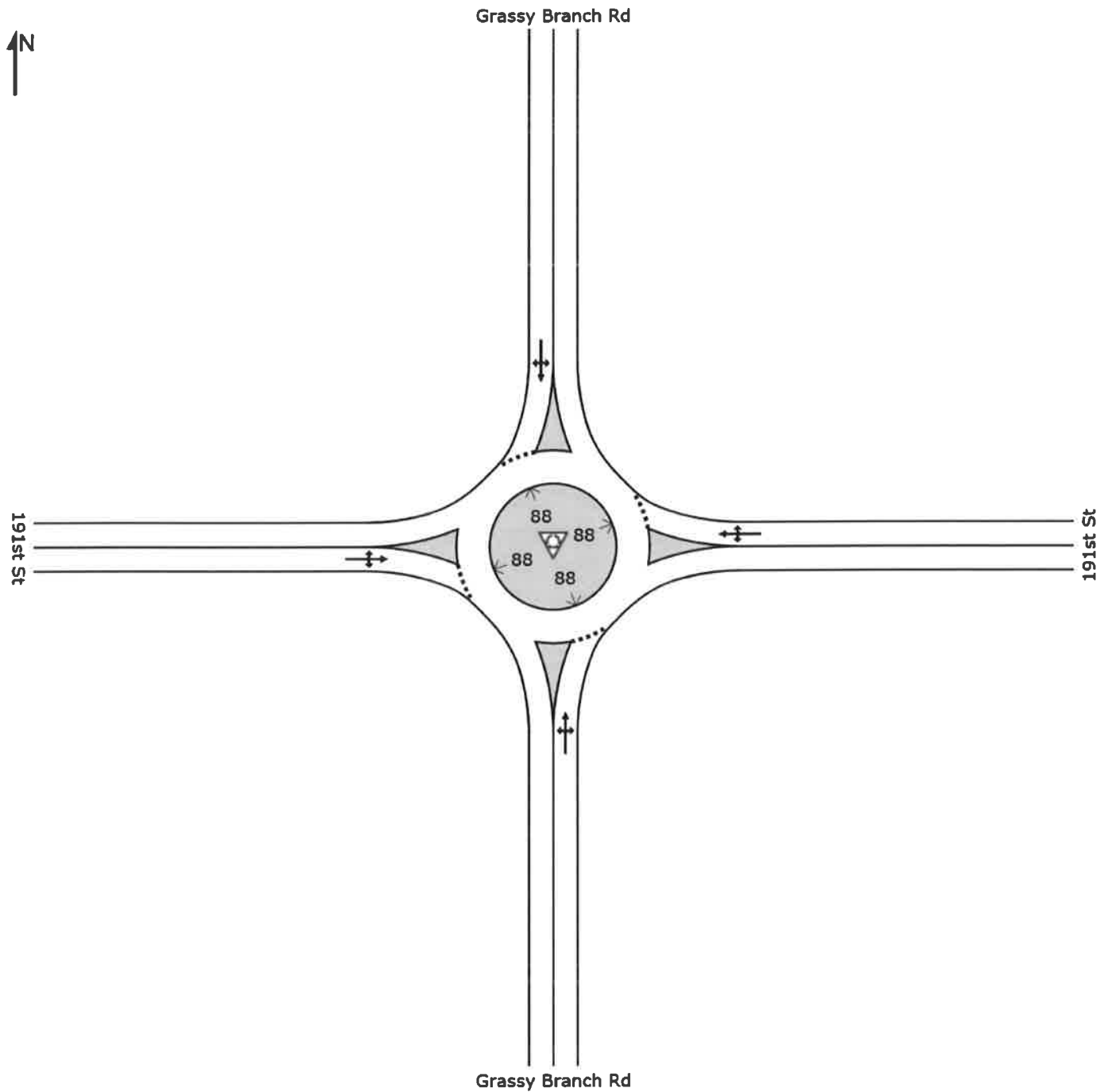
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 191st St & Grassy Branch Rd - 2022

191st & Grassy Branch - 2022 Peak Hour
Roundabout



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MOVEMENT SUMMARY

Site: 191st St & Grassy Branch Rd - 2042

191st & Grassy Branch - 2042 Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Grassy Branch Rd											
3	L2	172	2.0	0.681	25.7	LOS D	7.9	206.7	1.00	1.15	30.7
8	T1	59	2.0	0.681	20.0	LOS C	7.9	206.7	1.00	1.15	30.9
18	R2	135	2.0	0.681	19.9	LOS C	7.9	206.7	1.00	1.15	30.2
Approach		365	2.0	0.681	22.6	LOS C	7.9	206.7	1.00	1.15	30.5
East: 191st St											
1	L2	111	2.0	0.570	15.3	LOS C	5.4	140.0	0.82	0.85	36.6
6	T1	313	2.0	0.570	9.6	LOS A	5.4	140.0	0.82	0.85	36.8
16	R2	107	2.0	0.570	9.5	LOS A	5.4	140.0	0.82	0.85	35.8
Approach		530	2.0	0.570	10.8	LOS B	5.4	140.0	0.82	0.85	36.5
North: Grassy Branch Rd											
7	L2	82	2.0	0.277	14.5	LOS B	1.9	49.8	0.77	0.80	36.5
4	T1	38	2.0	0.277	8.8	LOS A	1.9	49.8	0.77	0.80	36.7
14	R2	102	2.0	0.277	8.6	LOS A	1.9	49.8	0.77	0.80	35.7
Approach		222	2.0	0.277	10.8	LOS B	1.9	49.8	0.77	0.80	36.2
West: 191st St											
5	L2	221	2.0	0.873	19.0	LOS C	18.7	488.2	1.00	0.89	34.5
2	T1	533	2.0	0.873	13.3	LOS B	18.7	488.2	1.00	0.89	34.7
12	R2	241	2.0	0.873	13.2	LOS B	18.7	488.2	1.00	0.89	33.8
Approach		995	2.0	0.873	14.5	LOS B	18.7	488.2	1.00	0.89	34.4
All Vehicles		2112	2.0	0.873	14.6	LOS B	18.7	488.2	0.93	0.91	34.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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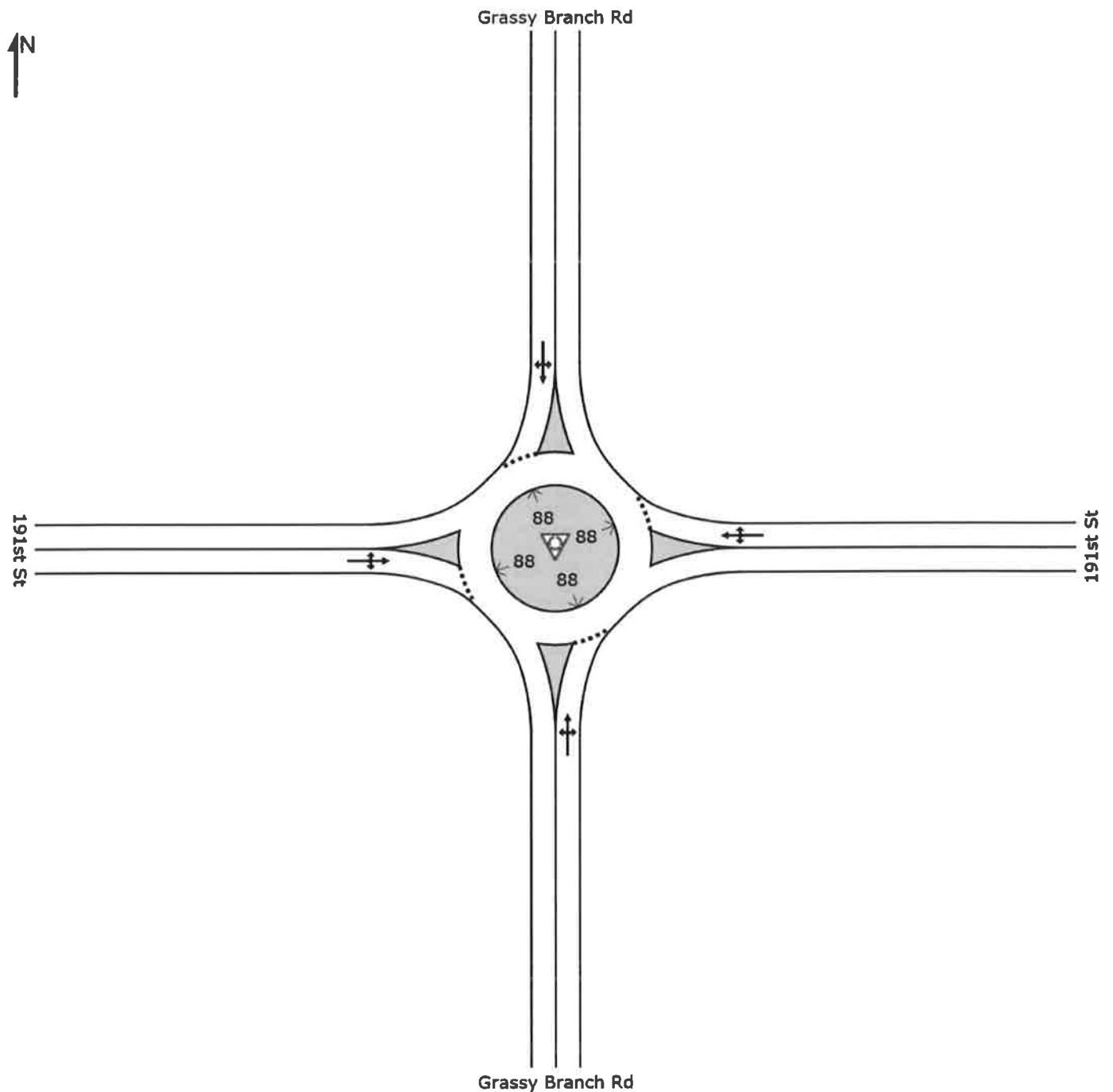
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SITE LAYOUT

 **Site: 191st St & Grassy Branch Rd - 2042**

191st & Grassy Branch - 2042 Peak Hour
Roundabout



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Project: C:\Users\ggimmer\Desktop\191st & Grassy Branch\SIDRA\191st & Grassy Branch - Peak Hour.sip6





AMERICAN
STRUCTUREPOINT
INC

QUANTITY COST ESTIMATE

191st Street & Grassy Branch Road Intersection
Improvement Hamilton County, IN

Project No.: 201602597

**OPINION OF PROBABLE CONSTRUCTION
COST**

Total: \$1,882,457.48

15.0% Contingency: \$282,388.62

ESTIMATED TOTAL: \$2,164,826.08

SFY 2022 ESTIMATED TOTAL = \$2,437,945.77

ID	Item No.	Description	Quantity	Unit	Unit Price	Item Total
0001	105-06845	CONSTRUCTION ENGINEERING	1.00	LS	\$32,178.78	\$32,178.78
0002	110-01001	MOBILIZATION AND DEMOBILIZATION	1.00	LS	\$80,446.90	\$80,446.90
0003	201-52370	CLEARING RIGHT OF WAY	1.00	LS	\$80,446.90	\$80,446.90
0004	203-02000	EXCAVATION, COMMON	5,000.00	CYS	\$22.00	\$110,000.00
0005	203-02070	BORROW	4,000.00	CYS	\$18.00	\$72,000.00
0006	205-08952	EROSION AND SEDIMENT CONTROL	1.00	EACH	\$35,000.00	\$35,000.00
0007	207-08268	SUBGRADE TREATMENT, TYPE III	1,377.00	SYS	\$4.00	\$8,508.00
0008	207-09835	SUBGRADE TREATMENT	11,068.00	SYS	\$18.00	\$199,224.00
0009	301-07448	COMPACTED AGGREGATE, NO. 53, BASE	463.00	TON	\$35.00	\$17,255.00
0010	308-08034	MILLING, ASPHALT, INCIDENTAL	500.00	SYS	\$8.00	\$4,000.00
0011	401-07326	QC/QA-HMA, SURFACE	733.00	TON	\$80.00	\$86,570.00
0012	401-07398	QC/QA-HMA, INTERMEDIATE	1,221.00	TON	\$80.00	\$97,680.00
0013	401-07424	QC/QA-HMA, BASE	4,165.00	TON	\$70.00	\$291,550.00
0014	401-10258	JOINT ADHESIVE, SURFACE	8,844.00	LFT	\$0.75	\$5,133.00
0015	401-10258	JOINT ADHESIVE, INTERMEDIATE	8,844.00	LFT	\$0.75	\$5,133.00
0016	401-11785	LIQUID ASPHALT SEALANT	8,844.00	LFT	\$0.50	\$3,422.00
0017	408-05520	ASPHALT FOR TACK COAT	7.00	TON	\$600.00	\$4,200.00
0018	502-11584	PCCP, 7 IN, TRUCK APRON	330.00	SYS	\$85.00	\$28,050.00
0019	503-05240	D-1 CONTRACTION JOINT	220.00	LFT	\$20.00	\$4,400.00
0020	604-05528	HMA FOR SIDEWALK	207.00	TON	\$100.00	\$20,700.00
0021	604-08088	CURB RAMP, CONCRETE	45.00	SYS	\$140.00	\$8,300.00
0022	605-08120	CURB, CONCRETE	882.00	LFT	\$22.00	\$19,404.00
0023	605-08155	CURB AND GUTTER, CONCRETE	3,422.00	LFT	\$22.00	\$75,284.00
0024	621-01004	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	3.00	EACH	\$600.00	\$1,800.00
0025	621-06574	SODDING	4,727.00	SYS	\$6.00	\$28,362.00
0026	622-02564	LANDSCAPING	1.00	LSUM	\$50,000.00	\$50,000.00
0027	628-09402	FIELD OFFICE, B	9.00	MOS	\$2,000.00	\$18,000.00
0028	715-05048	PIPE, TYPE 4 CIRCULAR 6 IN	3,422.00	LFT	\$4.50	\$15,399.00
0029	718-08532	VIDEO INSPECTION FOR UNDERDRAINS	3,000.00	LFT	\$1.00	\$3,000.00
0030	718-52610	AGGREGATE FOR UNDERDRAINS	308.00	CYS	\$40.00	\$12,320.00
0031	718-98153	GEOTEXTILES FOR UNDERDRAIN	3,422.00	SYS	\$2.00	\$8,844.00
0032	798-XXXXX	STORMWATER SYSTEM	1.00	LSUM	\$250,000.00	\$250,000.00
0033	801-06775	MAINTAINING TRAFFIC	1.00	LS	\$80,446.90	\$80,446.90
0034	802-04983	SIGNING AND PAVEMENT MARKINGS	1.00	LSUM	\$30,000.00	\$30,000.00
0035	807-04744	LIGHTING	1.00	LSUM	\$123,000.00	\$123,000.00

Prepared By:

Thant L. Olin PE 11/16/16

Cost Estimate | Page 1 of 1

Emission Calculations

Roundabout

CALCULATION INPUTS

Data Type	User-Defined Values
Scenario Year	2022
Street 1	
Total Hourly Volume Approach 1 (North)	140
Percentage of Left Turns Approach 1 (North)	22%
Percentage of Right Turns Approach 1 (North)	25%
Hourly Volume Approach 2 (South)	232
Percentage of Left Turns Approach 2 (South)	47%
Percentage of Right Turns Approach 2 (South)	37%
Street 2	
Hourly Volume Approach 3 (East)	341
Percentage of Left Turns Approach 3 (East)	22%
Percentage of Right Turns Approach 3 (East)	19%
Hourly Volume Approach 4 (West)	642
Percentage of Left Turns Approach 4 (West)	22%
Percentage of Right Turns Approach 4 (West)	25%
Other Inputs	
Truck Percentage (using the roundabout)	2%
Peak Hour Factor (PHF)	0.92
Proposed Number of Lanes for Roundabout	1
Peak Hour Intersection Delay before Improvement (s/veh)	74

EMISSION FACTORS AND CONSTANTS

Constants	
Peak Hour to Daily Conversion	10
Number of weekdays per year	250
Heavy Vehicle Adjustment Factor	1.00
Capacity - Default B value	-0.0010
Emission Factors	
Light Duty Emission Factor GHG (g CO ₂ eq/hour)	2991.2
Light Duty Emission Factor PM NO _x (g/hour)	0.7
Light Duty Emission Factor PM (g/hour)	0.1
Light Duty Emission Factor NO _x (g/hour)	1.4
Light Duty Emission Factor VOC(g/hour)	2.0
Light Duty Emission Factor SO ₂ (g/hour)	0.0
Light Duty Emission Factor CO (g/hour)	11.8
Truck Emission Factor for GHG (g CO ₂ eq/hour)	7530.5
Truck Emission Factor for PM No _x (g/hour)	37.0
Truck Emission Factor for PM (g/hour)	2.5
Truck Emission Factor for NO _x (g/hour)	35.5
Truck Emission Factor for VOC (g/hour)	6.3
Truck Emission Factor SO ₂ (g/hour)	0.1
Truck Emission Factor CO (g/hour)	13.7

SCENARIO YEAR OUTPUTS

Results	Value			
	North (Approach 1)	East (Approach 3)	South (Approach 2)	West (Approach 4)
Entry / Conflicting Flow Rate - Roundabout				
Adjusted Flow - North (Approach 1)		70	40	154
Adjusted Flow - East (Approach 3)	33		93	370
Adjusted Flow - South (Approach 2)	81	82		174
Adjusted Flow - West (Approach 4)	38	300	119	
Entry Flow (pc/h)	152	452	252	698
Conflicting Flow (pc/h)	500	312	557	196
Capacity - Approach 1 (pc/h)		685		
Capacity - Approach 2 (pc/h)		648		
Capacity - Approach 3 (pc/h)		827		
Capacity - Approach 4 (pc/h)		929		
V/C Approach 1 (veh/h)		0.22		
V/C Approach 2 (veh/h)		0.39		
V/C Approach 3 (veh/h)		0.59		
V/C Approach 4 (veh/h)		0.75		
Delay Calculation				
Improved Delay Approach 1 (s/veh)		7.86		
Improved Delay Approach 2 (s/veh)		11.01		
Improved Delay Approach 3 (s/veh)		12.22		
Improved Delay Approach 4 (s/veh)		18.30		
Peak Hour Intersection Delay after Improvement (s/veh) (Calculated)		14.44		
Existing Peak Hour Delay (Veh-hr)		27.70		
Improved Peak Hour Delay (Veh-hr)		5.44		
Existing Total Daily Emissions GHG (g)		816,229		
Existing Total Daily Emissions PM NOx (g)		217,315		
Existing Total Daily Emissions PM (g)		15,386		
Existing Total Daily Emissions NOx (g)		394,376		
Existing Total Daily Emissions VOC (g)		535,120		
Existing Total Daily Emissions SO2 (g)		9,286		
Existing Total Daily Emissions CO (g)		3,212,557		
Improved Total Daily Emissions GHG (g)		160,156,041		
Improved Total Daily Emissions PM NOx (g)		42,640		
Improved Total Daily Emissions PM (g)		3,019		
Improved Total Daily Emissions NOx (g)		77,382		
Improved Total Daily Emissions VOC (g)		104,998		
Improved Total Daily Emissions SO2 (g)		1,822		
Improved Total Daily Emissions CO (g)		630,351		

RESULTS

DELAY IMPACT

Reduction in Annual Vehicle Hours of Delay	55,667
Eliminated Annual Auto VMT	N/A

TOTAL REDUCTION

Total Annual Reductions in GHG emissions (g CO2 /year)	164,018,181
Total Annual Reductions in PM NOx Emissions (g/year)	43,669
Total Annual Reductions in PM Emissions (g/year)	3,092
Total Annual Reductions in NOx Emissions (g/year)	79,248
Total Annual Reductions in VOC Emissions (g/year)	107,530
Total Annual Reductions in SO2 Emissions (g/year)	1,866
Total Annual Reductions in CO Emissions (g/year)	645,551
Total Daily Reductions in GHG emissions (short tons/day)	0.723
Total Daily Reductions in PM NOx Emissions (short tons/day)	0.00019
Total Daily Reductions in PM Emissions (short tons/day)	0.00001
Total Daily Reductions in NOx Emissions (short tons/day)	0.00035
Total Daily Reductions in VOC Emissions (short tons/day)	0.00047
Total Daily Reductions in SO2 Emissions (short tons/day)	0.00001
Total Daily Reductions in CO Emissions (short tons/day)	0.00285

MAIN MENU

LOGOUT | INDOYMP

INDIANAPOLIS Metropolitan Planning Organization

Planning the transportation future for the Indianapolis Region

DES NUM: IMPO1501108

VERSION: 1

STATUS: In Progress - Programmed -

LAST MODIFIED BY: Bradley Davis (11/22/2016) ACCEPTED BY: N/A

FEDERAL APPROVAL: ()

HISTORY (+) PDF DRILLDOWN REPORT PRINTER FRIENDLY REPORT

THIS PROJECT VERSION IS IN PROGRESS
THERE IS NO FEDERALLY APPROVED VERSION YET.

TIP PROGRAMMING OBLIGATION PURCHASE ORDER PROJECT DELIVERY MAP DOCUMENTS AMENDMENT HISTORY

ADMINISTRATIVE EDIT

ADOPTION/AMENDMENT: 16-10 - CFP - Q4 2016
SUBJECT TO 10% FED CAP? LRTP REQUIRED MODEL REG SIG IS CMAQ CMP GEO REGION Y

PROJECT INFORMATION

WHAT TYPE OF FEDERAL FUNDS ARE YOU SEEKING FOR THIS PROJECT?
(CHECK ALL THAT APPLY)PRIMARY DES #
IMPO1501108IMPLEMENTING AGENCY
Hamilton Co.☒ CMAQ ☐ HSIP ☐ PLANNING ☒ STP GROUP I URBAN ☐ TAP

ID TYPE

PROJECT MANAGER

PHONE (10-DIGIT)

EMAIL

Bradley Davis

3177737770

bradley.davis@hamilton

INDOT DISTRICT

COUNTY

Hamilton Co.

☐ Crawfordville ☒ Greenfield ☐ Seymour ☐ Various

SAME AS ABOVE

ERG

PHONE (10-DIGIT)

EMAIL

Bradley Davis

3177737770

bradley.davis@hamilton

PROJECT TYPE

PROJECT CATEGORY

FUNCTIONAL CLASSIFICATION

CAPACITY INC

BIKE/PED
COMPONENT & TOWARDS BIKE/PED
(S) 7
Yes

Intersection or Intersection Groups

Congestion Reduction

Major Collector

No

PROJECT TITLE

191st St @ Grassy Branch Rd R'bout

PROJECT DESCRIPTION - GUIDELINES

This project will replace the existing four way stop at 191st St/Grassy Branch Rd with a modern roundabout to provide for more efficient traffic flow/congestion relief and air quality improvements.

WHAT IS THE CURRENT STATUS OF THE PROJECT'S DEVELOPMENT?

None of the above

WHAT IS THE RELATION OF THE PROJECT TO OTHER LOCAL AND/OR REGIONAL IMPROVEMENTS?

This is an isolated intersection project but is part of a larger effort to improve many intersection in this growing area of the county. By improving intersections (nodes) the efficiency of traffic flow will greatly increase without the near term need to add travel lanes.

HAS YOUR AGENCY SUBMITTED YOUR ADA TRANSITION PLAN TO INDOT VIA THE ITAP PORTAL?

Yes

DOES YOUR PROJECT COMPLY WITH THE COMPLETE STREETS POLICY?

Yes

EXISTING TRAFFIC VOLUMES (ADT)*

(Average of Segments for Corridors)

12750

10

ACCIDENT RATES

(Last 3 year, number of accidents / million vehicles, avg. of intersection groups)

Rate < 1.5

0

EXISTING OPERATIONS

(Levels of Service) (overall for groups)

LOS = E

15

FUTURE OPERATIONS

(Improvements to peak hour LOS, e.g. LOS F to LOS C, LOS E to LOS B, LOS D to LOS A)

3 or more LOS

20

TOTAL STP POINTS 45

* Documentation is required to substantiate the scores; particularly those criteria identified by an asterisk (*)

EXEMPT CATEGORY

IS PROJECT IN URBANIZED AREA

INDY MPA

Exempt

Y

COMPLETE STREETS POLICY COMPLIANCE [1]

Is Project Area or Site Located Along an Existing or Proposed Fixed Transit Corridor?

** SPONSORS WITH PROJECTS LOCATED ON FIXED TRANSIT CORRIDORS MUST CONTACT TRANSIT PROVIDERS FOR FEEDBACK **
REFER TO ONLINE MAP TO IDENTIFY EXISTING AND PROPOSED FIXED TRANSIT CORRIDORS:

No

This Project Complies with the IMPO Regional Complete Streets Policy by Including:

- ☐ PROJECT AREA ALREADY INCLUDES SIDEWALK ALONG ENTIRE LENGTH OF PROJECT CORRIDOR (ONE SIDE)
- ☐ PROJECT AREA ALREADY INCLUDES SIDEWALK ALONG ENTIRE LENGTH OF PROJECT CORRIDOR (BOTH SIDES)
- ☐ PROJECT AREA ALREADY INCLUDES MULTI-USE PATH ALONG ENTIRE LENGTH OF PROJECT CORRIDOR (ONE SIDE)
- ☐ PROJECT AREA ALREADY INCLUDES MULTI-USE PATH ALONG ENTIRE LENGTH OF PROJECT CORRIDOR (BOTH SIDES)
- ☐ PROJECT AREA ALREADY INCLUDES BIKE LANE(S) ALONG ENTIRE LENGTH OF PROJECT CORRIDOR (ONE SIDE IF ONE-WAY TRAFFIC)
- ☐ PROJECT AREA ALREADY INCLUDES BIKE LANE(S) ALONG ENTIRE LENGTH OF PROJECT CORRIDOR (BOTH SIDES IF TWO-WAY TRAFFIC)

☐ NEW SIDEWALK

SIDEWALK IS ON

TOTAL LENGTH:

FACILITY WIDTH:

☒ NEW MULTI-USE PATH

PATH IS ON

ONE SIDE

TOTAL LENGTH:

1050 ft

FACILITY WIDTH:

10'

☐ NEW ON-STREET BIKE LANE(S) (MINIMUM FOUR FOOT WIDTH)

BIKE LANE IS ON

TOTAL LENGTH:

FACILITY WIDTH:

This Project Also Includes the Following Optional Facilities:

Information provided in this section will assist the MPO with federally and state mandated performance measure tracking.

☐ OFF-STREET CYCLE TRACK / ETC.

TOTAL LENGTH:

FACILITY WIDTH:

☐ BIKEWAY SHARROWS (ARROWS INDICATING SHARED BICYCLE / MOTOR VEHICLE ROUTE)

TOTAL LENGTH:

☐ BICYCLE PARKING

TOTAL NUMBER OF PARKING SPACES:

☒ DESIGNATED CROSSWALKS (SPECIAL PAVING / PAINTING / ETC.)

TOTAL NUMBER OF CROSSINGS:

1

☐ PEDESTRIAN CROSSING SIGNALS

TOTAL NUMBER OF SIGNALS:

☐ PEDESTRIAN-SCALED LIGHTING (LIGHT FIXTURE MOUNTED NO HIGHER THAN 16 FEET ABOVE GRADE)

TOTAL LENGTH ALONG CORRIDOR:

☒ ADA ACCESSIBLE RAMPS

TOTAL NUMBER OF RAMPS:

4

☐ DEDICATED TRANSIT FACILITY (ON-STREET DEDICATED TRANSIT-WAY)

TOTAL LENGTH OF LANE(S):

☐ TRANSIT STOP / SHELTER / STATION

STOP(S) - TOTAL NUMBER:

SHELTER(S) - TOTAL NUMBER:

STATION(S) - TOTAL NUMBER:

☒ MEDIAN REFUGE ISLAND FOR CROSSING PEDESTRIANS

TOTAL NUMBER:

1

TOTAL AREA (SF):

143

☐ CURB EXTENSIONS (BUMPOUTS) AT INTERSECTION(S)

TOTAL NUMBER:

TOTAL AREA (SF):

☐ ROAD DIET (REDUCING NUMBER OF TRAVEL LANES TO ACCOMMODATE OTHER MODES)

TRAVEL LANES BEFORE:

TRAVEL LANES AFTER:

☐ RURAL AREAS ONLY - WIDE SHOULDERS, AT LEAST 4 FEET OF WIDTH FREE OF RUMBLE STRIP

TOTAL LENGTH:

☐ OTHER:

SYSTEM	ROUTE	LOCATION TYPE	PRIMARY CROSSSTREET	SECONDARY CROSSSTREET	MAP
Local		Intersection	191st St	Grassy Branch Rd	

PROGRAMMING INFORMATION (\$0)

Be sure to upload an Itemized cost estimate. [\[UPLOAD\]](#) [\[HISTORICAL REVENUES\]](#) [\[GRAPH REVENUES\]](#)

EST TOTAL PROJECT COST		CALCULATE FEDERAL MATCH		MAX FED FUNDS AMOUNT		LETTING DATE		OPEN TO TRAFFIC DATE	
\$3,260,000		80%		N/A				2022	
STATE FISCAL YEAR (Jul-Jun)	FUND TYPE (PROGRAMMED REVENUE SOURCE) - FUND HELP	PE/PL	ROW	CN	CE	TOTAL			
2018	Local - Other	\$335,000	\$0	\$0	\$0	\$335,000			
2019	Local - Other	\$0	\$180,000	\$0	\$0	\$180,000			
2022	FEDERAL - CMAQ	\$0	\$0	\$1,952,000	\$244,000	\$2,196,000			
2022	Local - Other	\$0	\$0	\$488,000	\$61,000	\$549,000			
						\$0			
						\$0			
						\$0			
						\$0			
						\$0			
						\$0			
						\$0			
2018		\$335,000	\$0	\$0	\$0	\$335,000			
2019		\$0	\$180,000	\$0	\$0	\$180,000			
2022		\$0	\$0	\$2,440,000	\$305,000	\$2,745,000			
	Local - Other	\$335,000	\$180,000	\$488,000	\$61,000	\$1,064,000			
	FEDERAL - CMAQ	\$0	\$0	\$1,952,000	\$244,000	\$2,196,000			
	GRAND TOTAL	\$335,000	\$180,000	\$2,440,000	\$305,000	\$3,260,000			

Air Quality Analysis (check appropriate Box)

QUANTITATIVE		QUALITATIVE	
<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
NOTE: Supporting documents of quantitative analysis or an explanation of a qualitative analysis must be attached. A qualitative analysis must have a range of emission estimates.			
REDUCTION IN OZONE PRECURSORS		KILOGRAMS/DAY	CMAQ \$/KG REDUCED
VOCs:		4301	1,021.11
COs:		2.5822	170.09
NOx:		316.89	1,385.52
REDUCTION IN PM 2.5 PRECURSORS		KILOGRAMS/YEAR	CMAQ \$/KG REDUCED
PM 2.5:		3.092	\$35,511
NOx:		43.669	\$2514.37
IS THE PROJECT OR PROGRAM A MANDATED TCM?		No	
IS THE PROJECT ON THE CAAA LIST OF TCM's?		No	
IS THIS PROJECT A "PUBLIC/PRIVATE PARTNERSHIP"?		No	
USEFUL LIFE OF PROJECT IN YEARS:		20	

CHANGE REASON

HISTORICAL COMMENTS

☒ NEW PROJECT

IS THE PROJECT IN THE 2035 LONG RANGE TRANSPORTATION PLAN?

No

Local/ State Highway Project (Check all that apply)

☐ THIS PROJECT IS SPLIT FROM ANOTHER PROJECT. THE TIP ID IS☐ THE PROJECT INCLUDES NEW TRAVEL LANES. DISTANCE OF LANES IS

MILE(S)

TOTAL # OF LANES: BEFORE

AFTER

☐ THE PROJECT INCLUDES ROAD WIDENING. DISTANCE OF WIDENING IS

MILE(S)

☐ THE PROJECT INCLUDES INTERSECTION IMPROVEMENTS.☐ THE PROJECT INCLUDES A TRANSITIONAL LANE ONTO OR OFF THE HIGHWAY.☐ THE PROJECT WILL RECONFIGURE AN INTERCHANGE. NO LANE ADDITION.☐ THE PROJECT INCLUDES AN EXTENSION OF AN INTERCHANGE RAMP ACCELERATION/DECELERATION LANE.
DISTANCE OF RAMP LANE

MILE(S)

☐ THIS PROJECT INCLUDES INTERSECTION TURN LANES.☐ OTHER CAPACITY IMPROVEMENT

Please Enter all that apply

CURRENT LOS

CURRENT ADT

ADT YEAR

☒ THIS PROJECT INCLUDES PEDESTRIAN IMPROVEMENTS.☒ THIS PROJECT INCLUDES BICYCLE IMPROVEMENTS.**PROJECT JUSTIFICATION - LAST UPDATED: 11/18/2018 - GUIDANCE**

The roundabout will greatly improve the efficiency of the Intersection from an operational standpoint as well as an air quality standpoint. This area of the county is rapidly growing. 191st, with Grand Park, is creating a considerable amount of development and with it will come additional traffic. With a 2022 construction year, we are proactively seeking this improvement.

PROJECT CHANGES (SINCE LAST AMENDMENT/ADOPTION)

New Project

Local - Other:

► Add funds in 2018 in PE/PL for \$335,000

► Add funds in 2019 in ROW for \$180,000

FEDERAL - CMAQ:

► Add funds in 2022 in CON for \$1,952,000, CE for \$244,000

Local - Other:

► Add funds in 2022 in CON for \$485,000, CE for \$61,000

Total project cost \$3,280,000

Save and Stay

Save for Later

Submit to INDYMPO

Reset Form



Hamilton County Map (EXHIBIT C)



June 29, 2017

-  Bridges
-  Parcels
-  Hwy Right of Way
-  Hwy County Roads
-  Hwy Right of Way Parcels

